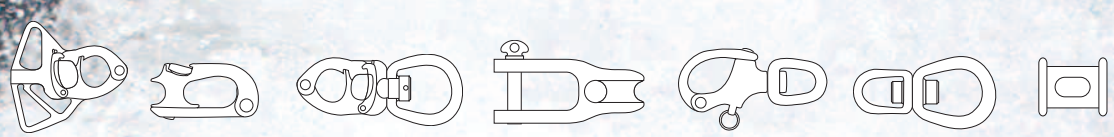
ADVANCED TECHNOLOGY TRIGGER RELEASE SNAP SHACKLES & HARDWARE

Tylaska

MARINE HARDWARE



www.tylaska.com

PERFORMANCE by Design

From the detailed assembly, finishing and individual testing of each unit, Tylaska shackles provide discriminating sailors with the ultimate in strength, performance and durability.

New two piece flanged pin design resists shear and cracking
Der starke Scharnier-Bolzen aus präzisions-geschliffenem Edelstahl 17-4PH nimmt hohe Scherkräfte auf
Axe frontal massif, usiné avec précision, résiste au cisaillement

Smooth outside shape will not snag on sails
Die glatte Form verfängt sich nicht im Segel
Bras vrillé suivant des données logarithmiques, permetrant d'éviter les accrochages aux anneaux de voiles

Patented release surface allows easy opening under load yet stays locked until released
Die patentierte Auslöser-Geometrie gestattet leichtes Öffnen unter Last, schliesst aber sicher bis zur Auslösung
Systéme de déclenchement breveté, permettant une ouverture aisée sous charge, tout en assurant un verrouillage efficace

Contoured finger trigger hole for easy operation
Der Finger-gerechte Abzug erlaubt enifache Handhabung
Anneau passe-doigt profilé, pour une ouverture aisée

Unique trigger is easy to open and close with only one hand!
Der einzigartige Abzug lässt den Schäkel leicht einhändig öffnen und schliessen
Une gâchette unique est facile á ouvrir et á fermer avec une main seulement

Reinforced hole adds strength, reduces wear
Die Bohrung ist verstärkt und dadurch stabiler, auch gegen Abnutzung
Points de pivot renforcé, pour plus de résistance et moins d'usure

Large flare resists snagging when dragged over decks
Der grosse Wulst verhütet ein Verfangen beim Gleiten über Deck
Partie largement évasée, évite les accrochages accidentels lorsque la manille traîne sur le pont

Solid 316 stainless pivot pin ensures long life
Der massive Wirbel-Zapfen aus Edelstahl 316 bedeutet langes Leben
Axe de pivot massif, longue derée

Extra long stroke 316 stainless spring resists corrosion
Die Feder aus Edelstahl 316 ist extra-lang und rostfrei
Long ressort amortisseur, restant souple

Patent 5,769,475
Patent D372,855
Patent 5,904,112
Patent 6,539,885
Others Pending.
MADE IN THE USA

Alloy bushing allows smooth swivel action
Die speziell legierte Buchse sorgt für tadellosen Wirbel-Lauf
Bague en alliage, permet un pivotement facile sous tension

Solid 316 cross pin prevents nut from unscrewing
Der Sicherungs-Stift aus massivem Edelstahl 316 verhindert ein Aufdrehen der Mutter
Goupille tranversale massive empêchant l'écrou de se deserrer

Threaded and pinned 17-4PH stainless nut withstands the most severe conditions
Die Splint-gesicherte Mutter aus Edelstahl 17-4PH ist von höchster Festigkeit
Gros écrou usiné conçu pour résister aux pires conditions. Frein-filet pour une sécurité renforcée

Rear drain hole flushes out spring
Die Federkammer hat ein Lenz-Loch
Drain á l'arriére permettant le rinçage du ressort

All components superpolished for maximum corrosion resistance
Alle Komponenten sind hochglanz-poliert für maximalen Rostschutz
Toutes les piéces subissent un polissage intensif pour une meilleure résistance á la corrosion

Aerospace 17-4PH stainless construction for extreme strength
Die konstruktion ist aus extrem starkem Raumfahrt-Edelstahl 17-4PH
Contruit avec acier inoxydable aerospace 17-4PH pour force extréme

How does advanced calculus make a better shackle?

Tylaska shackles were meticulously designed and computer optimized using the latest finite element CAD software. Aerospace grade 17-4 PH stainless steel construction gives Tylaska shackles the ultimate in strength-to-weight ratios. The precision engineered U.S. made shackles are constructed to near-military specifications. Tylaska's patented mathematical curvature of the release mechanism allows the shackles to be easily opened even under tremendous loads.

From the detailed assembly, finishing and individual testing of each unit, Tylaska shackles provide discriminating sailors with the ultimate in strength, performance and durability. Many years of design and rigorous testing created a series of shackles that provide a standard of quality previously unavailable.

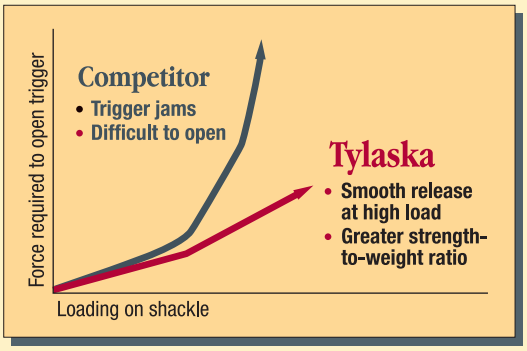
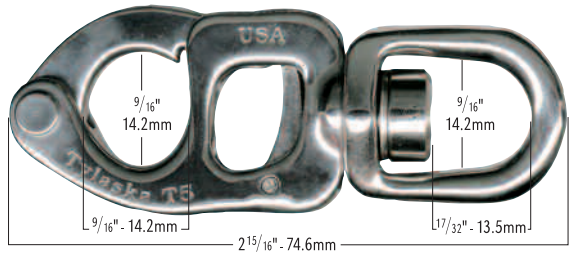


Photo Credit: various images provided by Quantum Sails Design Group

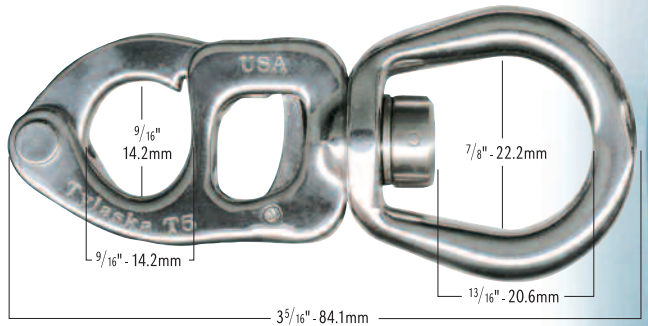
Tylaska Marine Hardware, 800 Flanders Road, Mystic, CT 06355 USA | Phone (860) 572-8440 | Fax (860) 572-0534 | www.Tylaska.com

T5

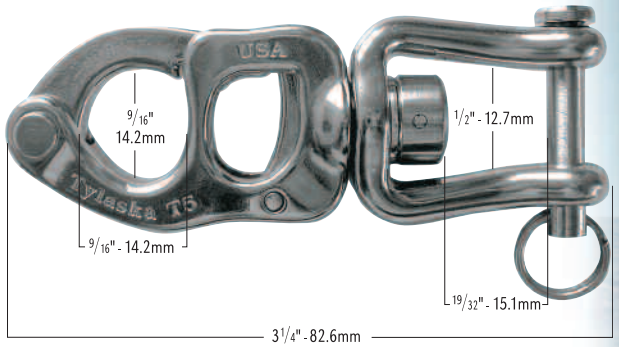
Tylaska T5 Snap Shackles are perfect for small boat applications requiring high strength and low weight. They have a breaking strength of 5,000 lbs and weigh just 2.2 ounces in the standard bail configuration. Ideal for J-24s, Mumm 30s and similar boats.



SB- Actual Size

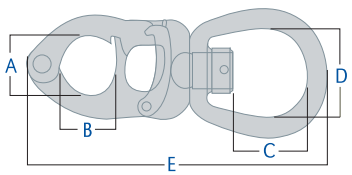


LB- Actual Size



CB- Actual Size

SHACKLE TYPE	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	THICKNESS in (mm)	WEIGHT oz (gm)	WORK LOAD lb (kg)	BREAKING STRENGTH lb (kg)	RECOMMENDED APPLICATIONS
T5 SB	9/16 (14.2)	9/16 (14.2)	17/32 (13.5)	9/16 (14.2)	2 15/16 (74.6)	.31 (7.9)	2.2 (59)	2,500 (1,136)	5,000 (2,273)	20-30' Boats
T5 LB	9/16 (14.2)	9/16 (14.2)	13/16 (20.6)	7/8 (22.2)	3 5/16 (84.1)	.31 (7.9)	2.8 (74)	2,500 (1,136)	5,000 (2,273)	20-30' Boats
T5 CB	9/16 (14.2)	9/16 (14.2)	19/32 (15.1)	1/2 (12.7)	3 1/4 (82.6)	.31 (7.9)	2.8 (79)	2,500 (1,136)	5,000 (2,273)	20-30' Boats



SB - Standard Bails provide ample room for attaching a line while keeping weight and overall shackle length to a minimum. Ideal for halyards and sheets.

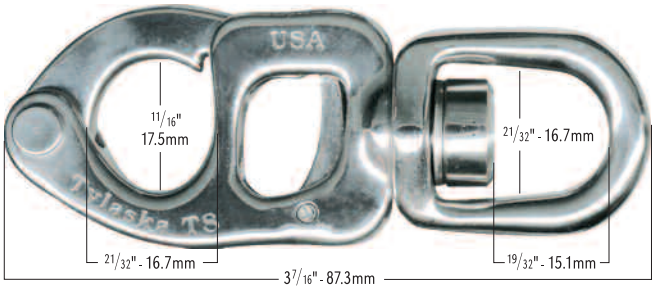
LB - Large Bails provide room for up to three additional shackles or a combination of shackles and lines. Ideal for spinnaker sheets, guys or other multi-line applications.

CB - Clevis Bails do not require splicing and provide moveable attachments to rings, deck fittings, furlers, rolling furlers, etc. Ideal for many uses.

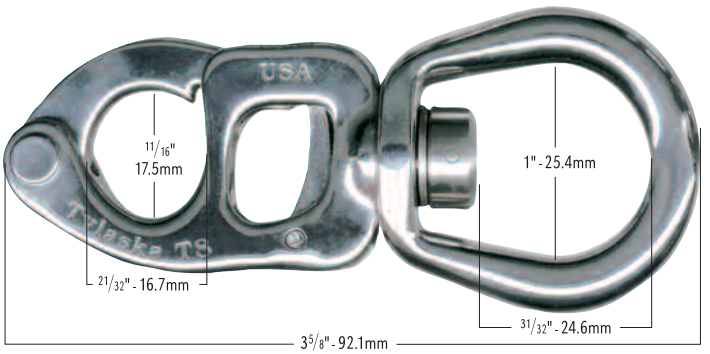
Every unit is pull tested and released under several different load conditions before shipping.

T8

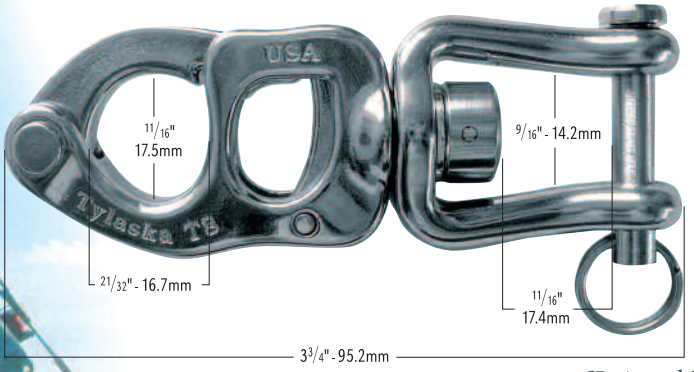
Tylaska T8 Snap Shackles are perfect for applications requiring high strength and low weight. They have a breaking strength of 8,000 lbs and weigh only 3.5 ounces in the standard bail configuration. Ideal for the 24 to 36 foot sailboat.



SB- Actual Size

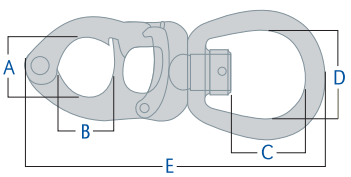


LB- Actual Size



CB- Actual Size

SHACKLE TYPE	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	THICKNESS in (mm)	WEIGHT oz (gm)	WORK LOAD lb (kg)	BREAKING STRENGTH lb (kg)	RECOMMENDED APPLICATIONS
T8 SB	11⁄16 (17.5)	21⁄32 (16.7)	19⁄32 (15.1)	21⁄32 (16.7)	37⁄16 (87.3)	.39 (9.9)	3.6 (97)	4,000 (1,818)	8,000 (3,636)	24-36' Boats
T8 LB	11⁄16 (17.5)	21⁄32 (16.7)	31⁄32 (24.6)	1 (25.4)	35⁄8 (92.1)	.39 (9.9)	4.6 (116)	4,000 (1,818)	8,000 (3,636)	24-36' Boats
T8 CB	11⁄16 (17.5)	21⁄32 (16.7)	11⁄16 (17.4)	9⁄16 (14.2)	33⁄4 (95.2)	.39 (9.9)	4.3 (122)	4,000 (1,818)	8,000 (3,636)	24-36' Boats



SB - Standard Bails provide ample room for attaching a line while keeping weight and overall shackle length to a minimum. Ideal for halyards and sheets.

LB - Large Bails provide room for up to three additional shackles or a combination of shackles and lines. Ideal for spinnaker sheets, guys or other multi-line applications.

CB - Clevis Bails do not require splicing and provide moveable attachments to rings, deck fittings, furlers, rolling furlers, etc. Ideal for many uses.

Every unit is pull tested and released under several different load conditions before shipping.

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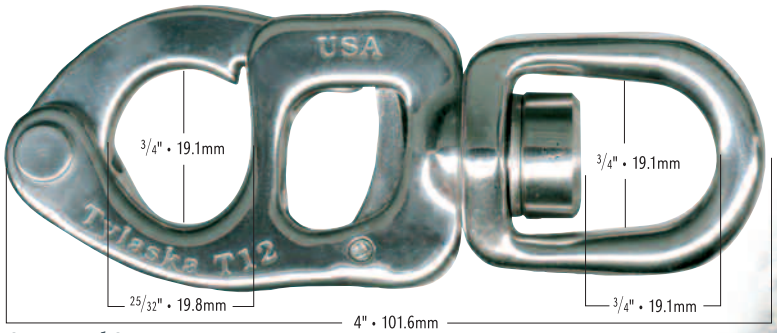
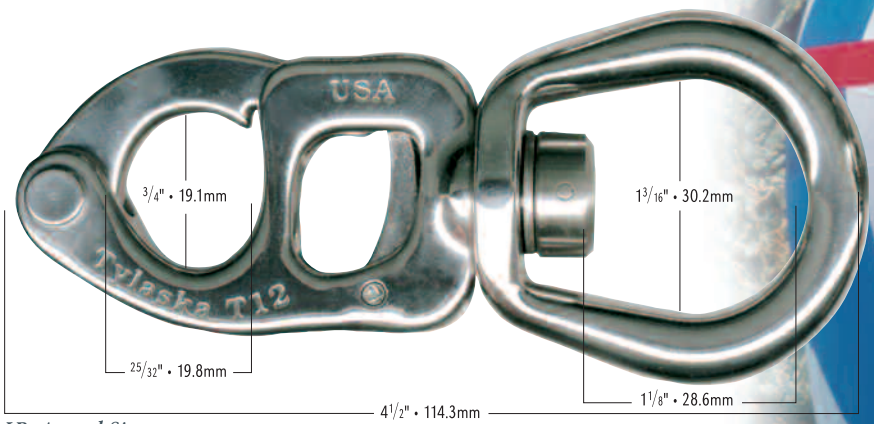
T12

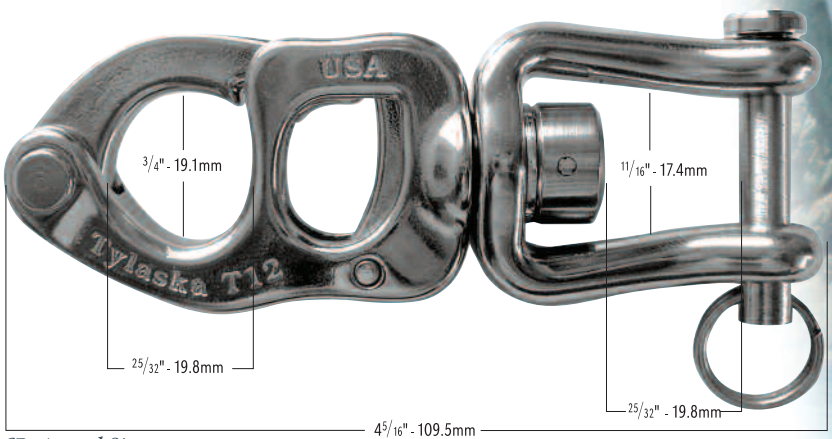
Tylaska T12 Snap Shackles are perfect for applications requiring high strength and low weight. They have a breaking strength of 12,000 lbs and weigh only 5.6 ounces in the standard bail configuration. Ideal for 30 to 45 foot boats.



SB- Actual Size

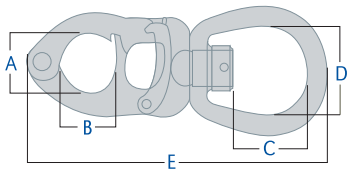


LB- Actual Size



CB- Actual Size

SHACKLE TYPE	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	THICKNESS in (mm)	WEIGHT oz (gm)	WORK LOAD lb (kg)	BREAKING STRENGTH lb (kg)	RECOMMENDED APPLICATIONS
T12 SB	¾ (19.1)	25⁄32 (19.8)	¾ (19.1)	¾ (19.1)	4 (101.6)	.45 (11.4)	5.8 (159)	6,000 (2,727)	12,000 (5,455)	30-45' Boats
T12 LB	¾ (19.1)	25⁄32 (19.8)	1⅛ (28.6)	13⁄16 (30.2)	4½ (114.3)	.45 (11.4)	8.0 (205)	6,000 (2,727)	12,000 (5,455)	30-45' Boats
T12 CB	¾ (19.1)	25⁄32 (19.8)	25⁄32 (19.8)	11⁄16 (17.4)	4 5⁄16 (109.5)	.45 (11.4)	6.9 (195)	6,000 (2,727)	12,000 (5,455)	30-45' Boats



SB - Standard Bails provide ample room for attaching a line while keeping weight and overall shackle length to a minimum. Ideal for halyards and sheets.

LB - Large Bails provide room for up to three additional shackles or a combination of shackles and lines. Ideal for spinnaker sheets, guys or other multi-line applications.

CB - Clevis Bails do not require splicing and provide moveable attachments to rings, deck fittings, furlers, rolling furlers, etc. Ideal for many uses.

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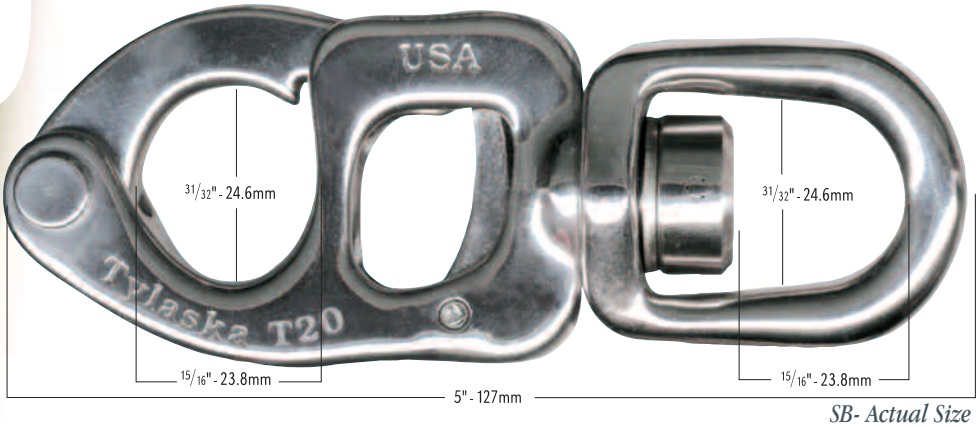
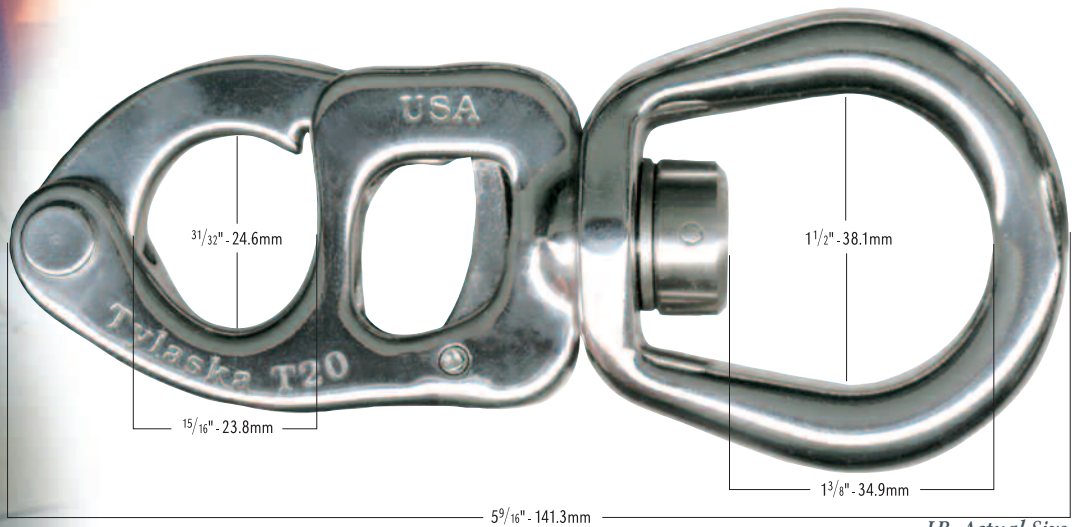
T20

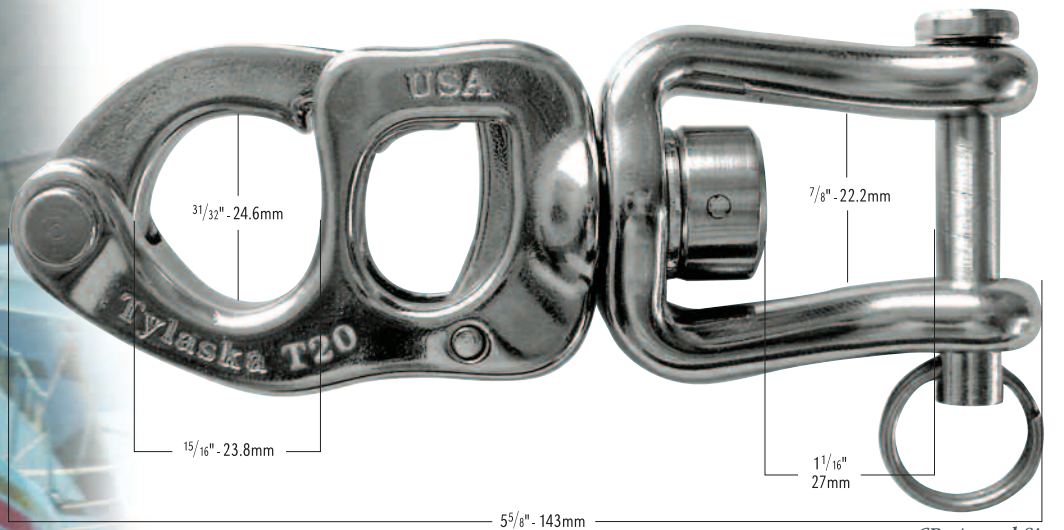
The T20 is a larger shackle designed for mid to large sized boats. They are popular on the America's Cup racing circuit. The T-20 has a breaking strength of 20,000 lbs. Standard bail configurations weigh only 11.9 oz. Ideal for 40 to 70 foot sailboats.



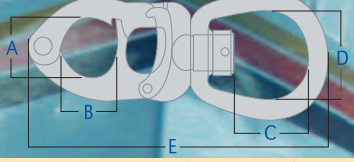
SB- Actual Size



LB- Actual Size



CB- Actual Size



SHACKLE TYPE	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	THICKNESS in (mm)	WEIGHT oz (gm)	WORK LOAD lb (kg)	BREAKING STRENGTH lb (kg)	RECOMMENDED APPLICATIONS
T20 SB	31/32 (24.6)	15/16 (23.8)	15/16 (23.8)	31/32 (24.6)	5 (127)	.57 (14.5)	11.9 (338)	10,000 (4,545)	20,000 (9,091)	40-70' Boats
T20 LB	31/32 (24.6)	15/16 (23.8)	1 3/8 (34.9)	1 1/2 (38.1)	5 9/16 (141.3)	.57 (14.5)	14.3 (406)	10,000 (4,545)	20,000 (9,091)	40-70' Boats
T20 CB	31/32 (24.6)	15/16 (23.8)	1 1/16 (27)	7/8 (22.2)	5 5/8 (143)	.57 (14.5)	15.6 (441)	10,000 (4,545)	20,000 (9,091)	40-70' Boats
T30 SB	1 1/4 (31.8)	1 1/8 (28.6)	1 1/8 (28.6)	1 1/4 (31.8)	6 3/8 (161.9)	.78 (19.8)	26.4 (636)	15,000 (6,818)	30,000 (13,636)	60-80' Boats
T30 LB	1 1/4 (31.8)	1 1/8 (28.6)	1 27/32 (46.8)	1 29/32 (48.4)	7 3/16 (182.6)	.78 (19.8)	29 (824)	15,000 (6,818)	30,000 (13,636)	60-80' Boats
T30 CB	1 1/4 (31.8)	1 1/8 (28.6)	1 1/4 (31.8)	1 1/16 (27)	6 13/16 (173)	.78 (19.8)	30.6 (866)	15,000 (6,818)	30,000 (13,636)	60-80' Boats

SB - Standard Bails | LB - Large Bails | CB - Clevis Bails

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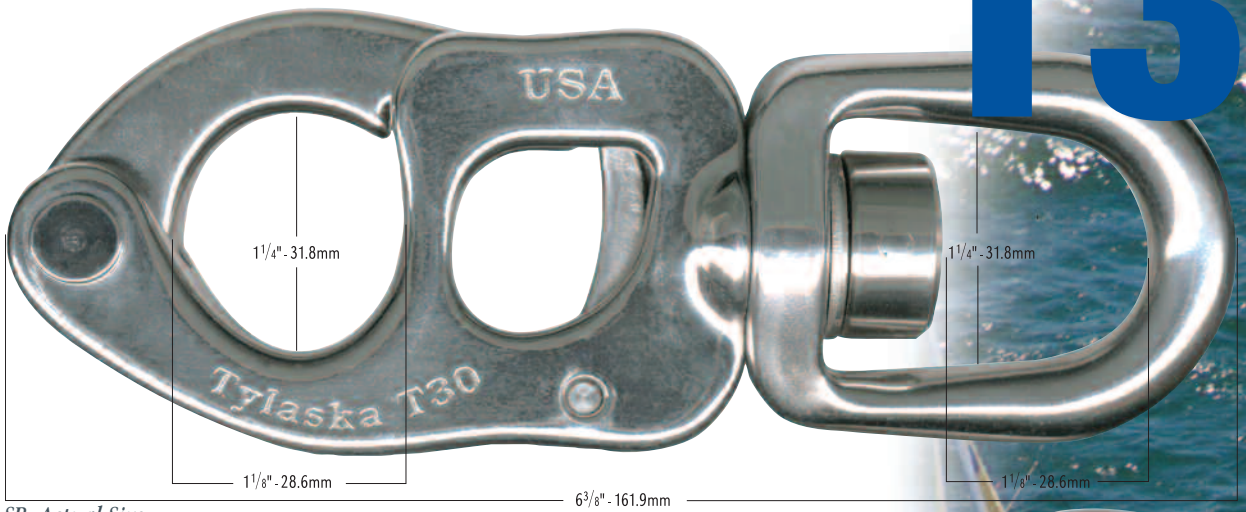
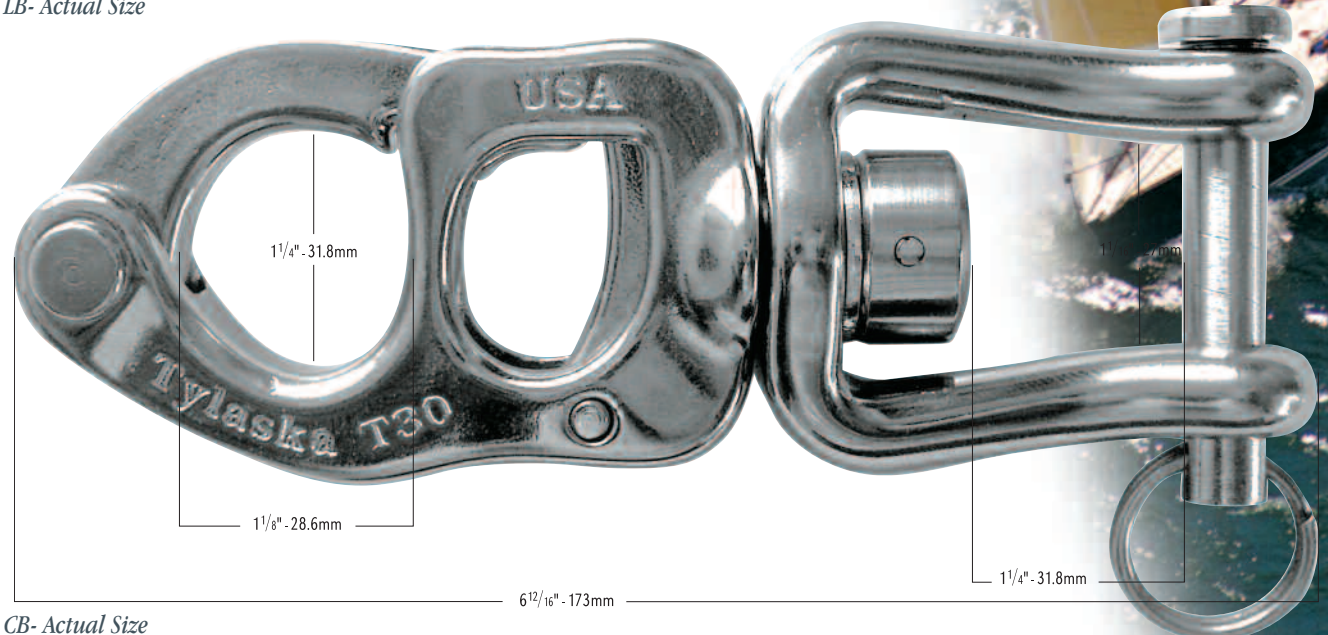
T30

Tylaska T30 is designed for large sailboats that need to support strong loads. With a breaking strength of 30,000 pounds, this shackle can handle sail loads on the largest of sailboats. A number of around-the-world racing teams utilize the T30.



SB- Actual Size

LB- Actual Size



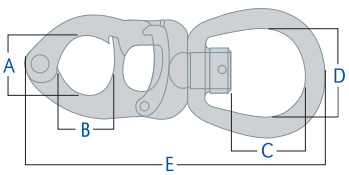
CB- Actual Size

Every unit is pull tested and released under several different load conditions before shipping.

T40

Tylaska T40 Snap Shackles are designed for massive sailboats or for towing or individual applications. With a breaking strength of 40,000 pounds, this shackle can handle sail loads on the largest of sailboats. They can be opened using either a trigger or lanyard. A lanyard allows for remote operation - ideal for towing applications. The locking pin provides extra security from accidental release.

SHACKLE TYPE	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	THICKNESS in (mm)	WEIGHT oz (kg)	WORK LOAD lb (kg)	BREAKING STRENGTH lb (kg)	RECOMMENDED APPLICATIONS
T40 SB	1.8 (45.7)	1.68 (42.6)	1.85 (47.1)	1.78 (45.2)	9.57 (243)	1.13 (28.6)	99.3 (2.82)	20,000 (9,090)	40,000 (18,181)	100' + Maxi Boats
T40 LB	1.8 (45.7)	1.68 (42.6)	2.87 (72.8)	2.91 (74.0)	10.8 (274)	1.13 (28.6)	137.5 (3.9)	20,000 (9,090)	40,000 (18,181)	100' + Maxi Boats
T40 CB	1.8 (45.7)	1.68 (42.6)	1.95 (49.6)	1.64 (41.8)	10.2 (258)	1.2 (29.3)	130.7 (3.7)	20,000 (9,090)	40,000 (18,181)	100' + Maxi Boats



SB - Standard Bails provide ample room for attaching a line while keeping weight and overall shackle length to a minimum. Ideal for halyards and sheets.

LB - Large Bails provide room for up to three additional shackles or a combination of shackles and lines. Ideal for spinnaker sheets, guys or other multi-line applications.

CB - Clevis Bails do not require splicing and provide moveable attachments to rings, deck fittings, furlers, rolling furlers, etc. Ideal for many uses.

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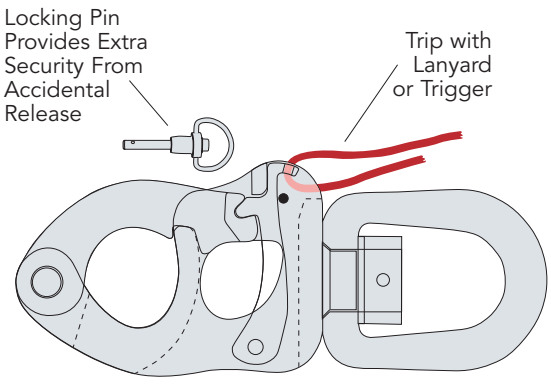
LB- Actual Size

SB- Actual Size

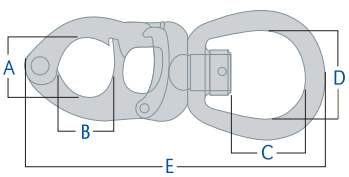
CB- Actual Size



T50

Tylaska T50 Snap Shackles are the largest trigger-type snap shackle ever made. They can be opened using either a trigger or lanyard. A lanyard allows for remote operation - ideal for towing applications. The locking pin provides extra security from accidental release.

SHACKLE TYPE	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	THICKNESS in (mm)	WEIGHT oz (kg)	WORK LOAD lb (kg)	BREAKING STRENGTH lb (kg)	RECOMMENDED APPLICATIONS
T50 SB	2 (50.8)	1.875(47.6)	2.063(52.4)	1.98 (50.3)	10.63 (270)	1.25 (31.7)	112.3 (3.13)	25,000 (11,364)	50,000 (22,727)	100' + Maxi Boats
T50 LB	2 (50.8)	1.875(47.6)	3.188(81)	3.24 (82.3)	12 (304.8)	1.25 (31.7)	152.7 (4.32)	25,000 (11,364)	50,000 (22,727)	100' + Maxi Boats
T50 CB	2 (50.8)	1.875(47.6)	2.17(55.1)	1.83 (46.5)	11.3 (287)	1.28 (32.5)	145.2 (4.12)	25,000 (11,364)	50,000 (22,727)	100' + Maxi Boats



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CB - Clevis Bails do not require splicing and provide moveable attachments to rings, deck fittings, furlers, rolling furlers, etc. Ideal for many uses.

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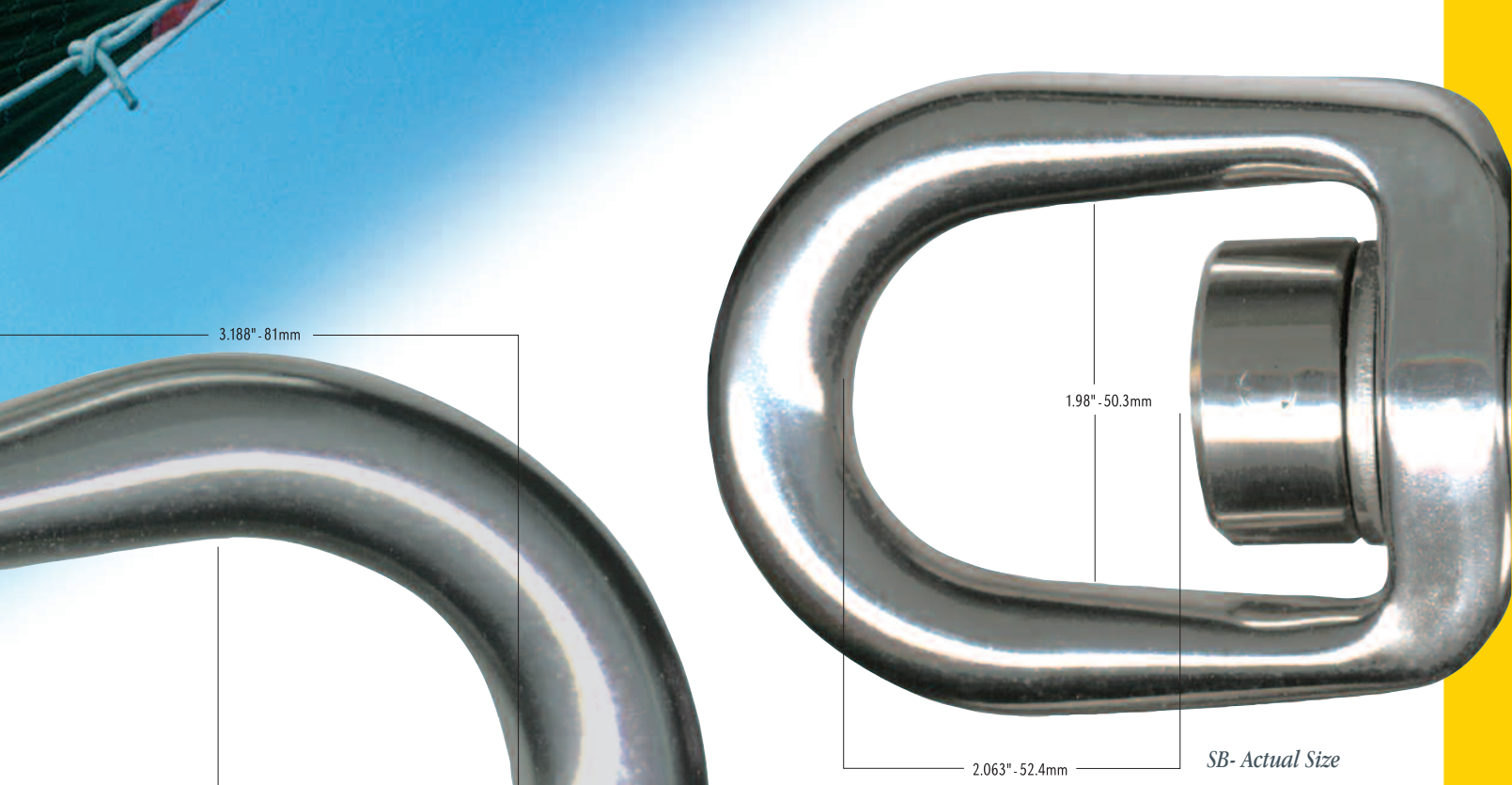
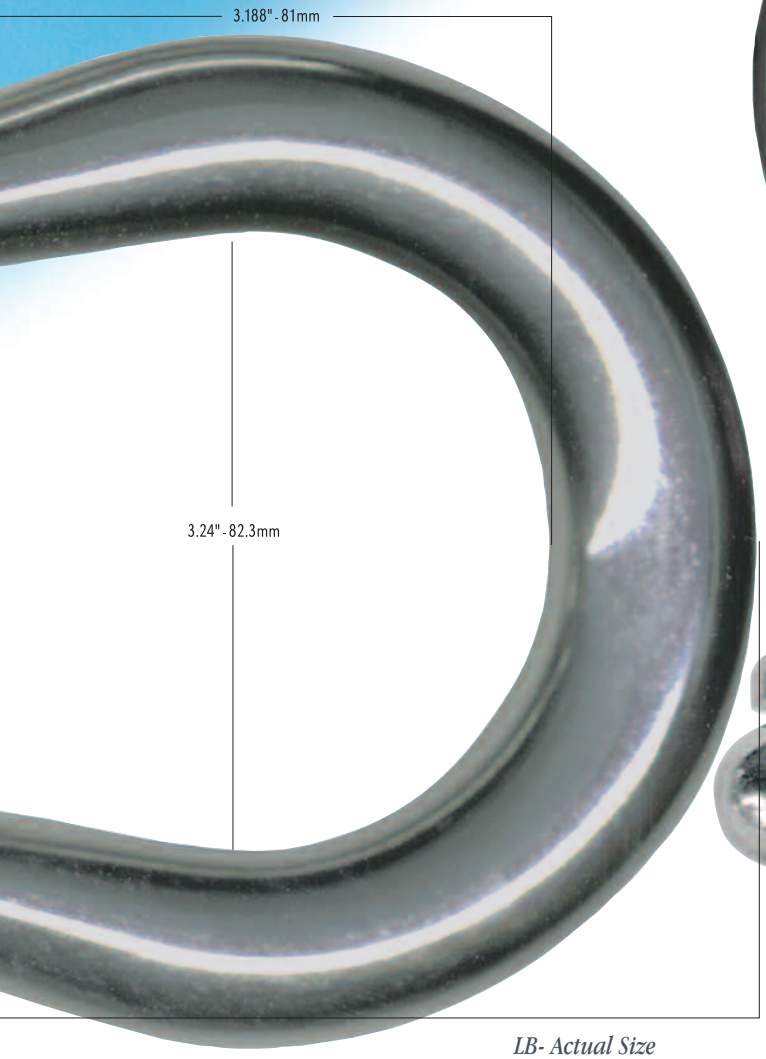
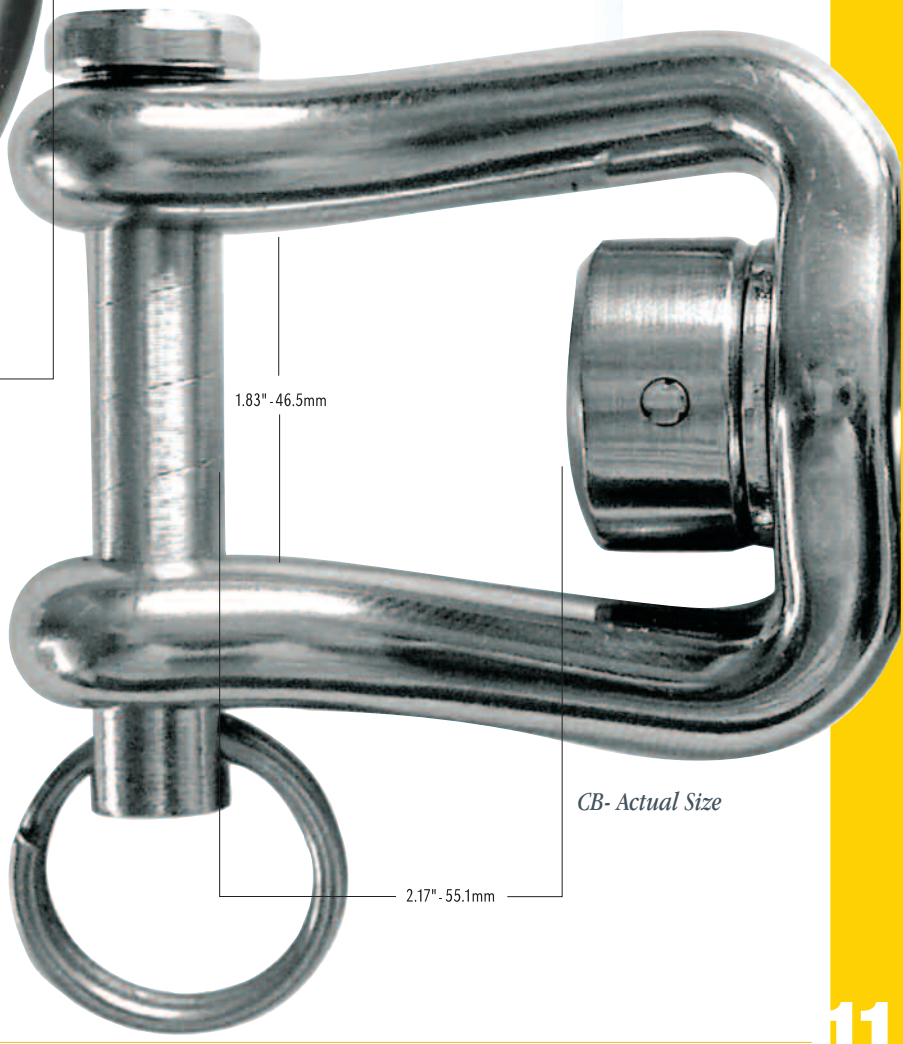


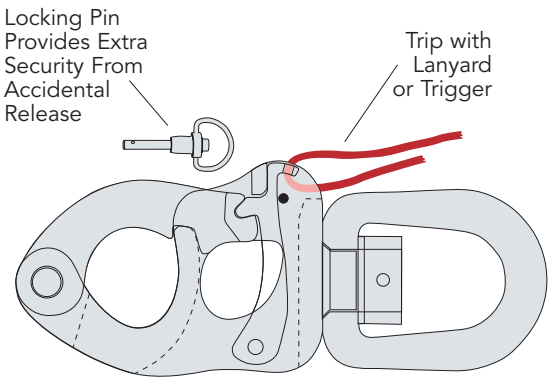
SB- Actual Size



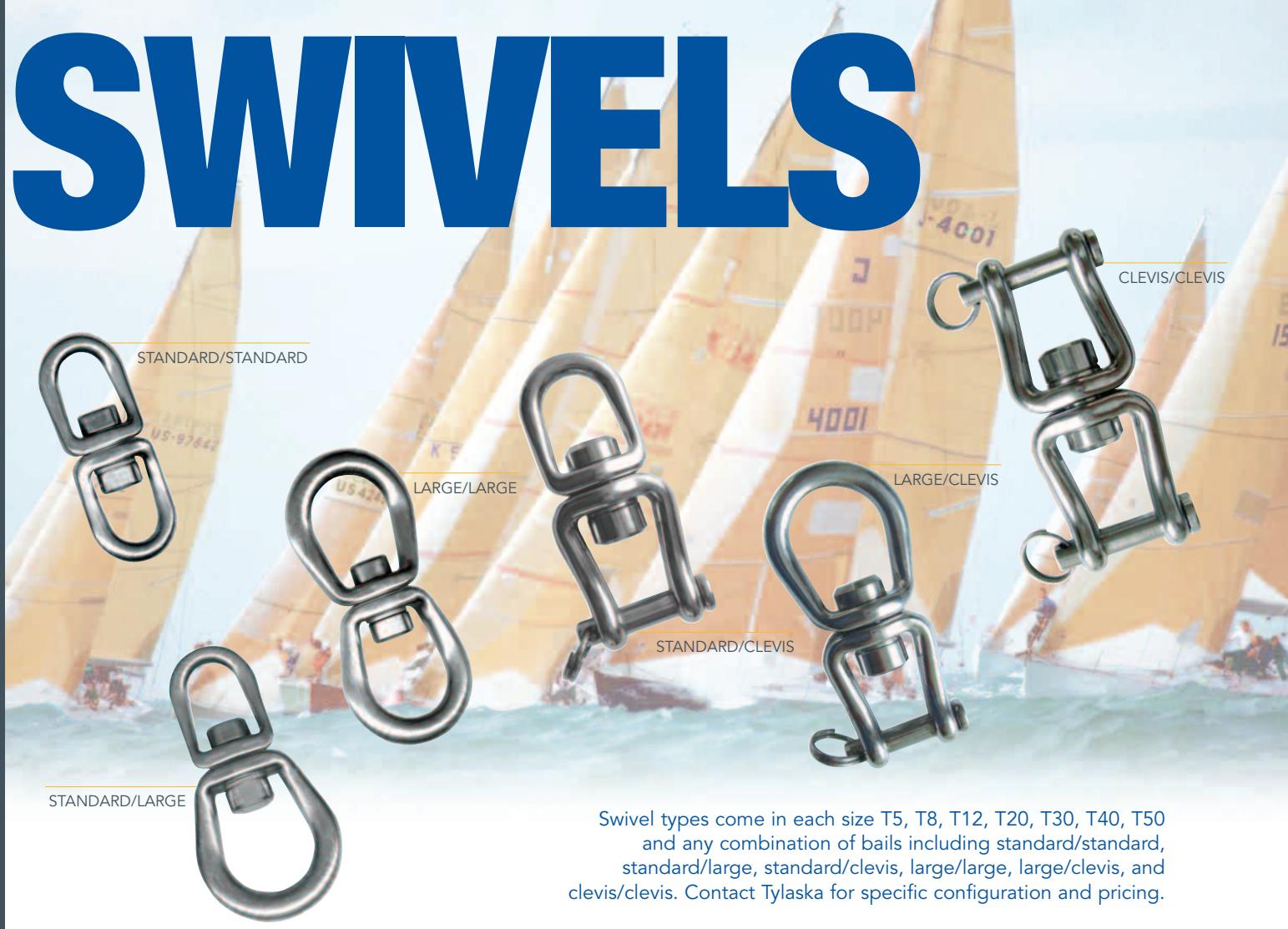
LB- Actual Size



CB- Actual Size



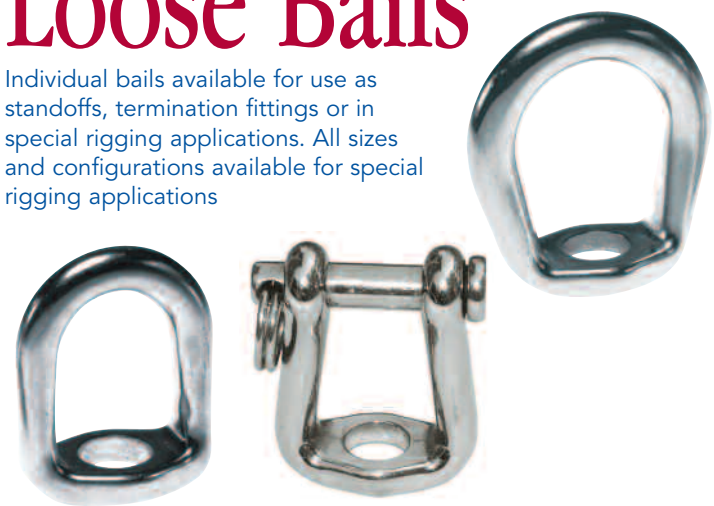
SWIVELS



Swivel types come in each size T5, T8, T12, T20, T30, T40, T50 and any combination of bails including standard/standard, standard/large, standard/clevis, large/large, large/clevis, and clevis/clevis. Contact Tylaska for specific configuration and pricing.

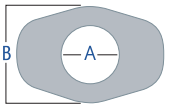
Loose Bails

Individual bails available for use as standoffs, termination fittings or in special rigging applications. All sizes and configurations available for special rigging applications



INDIVIDUAL LINKED BAILS

SWIVEL TYPE	A in (mm)	B in (mm)	WORK LOAD lb (kg)	BREAKING STRENGTH lb (kg)
T5 SB	.398 (10.1)	.625(15.9)	2,500 (1,136)	5,000 (2,273)
T5 LB	.398 (10.1)	.712 (18.1)	2,500 (1,136)	5,000 (2,273)
T5 CB	.398 (10.1)	.625(15.9)	2,500 (1,136)	5,000 (2,273)
T8 SB	.398 (10.1)	.685 (17.4)	4,000 (1,818)	8,000 (3,636)
T8 LB	.398 (10.1)	.838 (21.3)	4,000 (1,818)	8,000 (3,636)
T8 CB	.398 (10.1)	.685(17.4)	4,000 (1,818)	8,000 (3,636)
T12 SB	.476 (12.1)	.889 (22.6)	6,000 (2,727)	12,000 (5,455)
T12 LB	.476 (12.1)	.974 (24.7)	6,000 (2,727)	12,000 (5,455)
T12 CB	.476 (12.1)	.889 (22.6)	6,000 (2,727)	12,000 (5,455)
T20 SB	.638 (16.2)	1.074 (27.3)	10,000 (4,545)	20,000 (9,091)
T20 LB	.638 (16.2)	1.215 (30.9)	10,000 (4,545)	20,000 (9,091)
T20 CB	.638 (16.2)	1.074 (27.3)	10,000 (4,545)	20,000 (9,091)
T30 SB	.795 (20.2)	1.460 (37.1)	15,000 (6,818)	30,000 (13,630)
T30 LB	.795 (20.2)	1.560 (39.6)	15,000 (6,818)	30,000 (13,630)
T30 CB	.795 (20.2)	1.460 (37.1)	15,000 (6,818)	30,000 (13,630)
T40 SB	.960 (24.4)	1.671 (42.4)	20,000 (9,091)	40,000 (18,182)
T40 LB	.960 (24.4)	2.083 (52.9)	20,000 (9,091)	40,000 (18,182)
T40 CB	.960 (24.4)	1.671 (42.4)	20,000 (9,091)	40,000 (18,182)
T50 SB	1.200 (30.5)	2.433 (61.8)	25,000 (11,364)	50,000 (22,727)
T50 LB	1.200 (30.5)	3.472 (88.2)	25,000 (11,364)	50,000 (22,727)
T50 CB	1.200 (30.5)	2.433 (61.8)	25,000 (11,364)	50,000 (22,727)



Bottom View of Loose Bail

SB - Standard Bails
LB - Large Bails
CB - Clevis Bails

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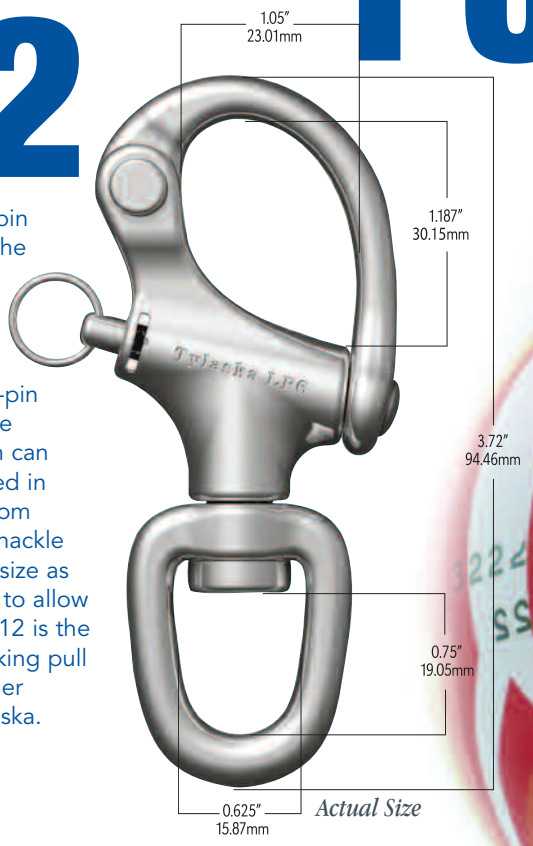
PULL PIN Shackles

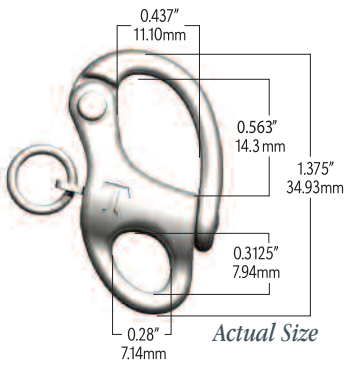
LP12

The new Tylaska LP series pull pin shackle is Tylaska's solution to the age old problem of pull-pin shackles that flog open. Tylaska's patented design integrates a simple locking mechanism that allows the pull-pin to be secured captive. Once the shackle is attached, the pull pin can be twisted a half turn and locked in place so that it doesn't open from snagging or flogging. The LP shackle has the same basic profile and size as other existing pull-pin shackles to allow for direct replacement. The LP 12 is the first in a line of subsequent locking pull pin shackles of larger and smaller dimensions to be made by Tylaska.



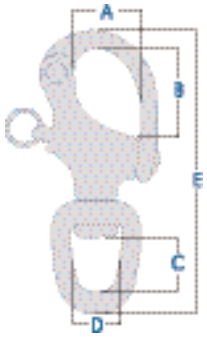
MP2

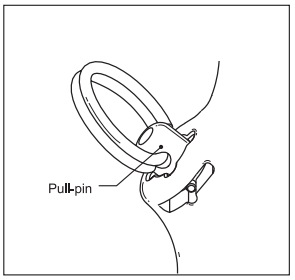
The new MP2 is now the smallest shackle Tylaska produces. Weighing less than 0.5 oz (14 grams), the MP2 has a breaking strength of 2,000 lbs, and a working strength of 1,000 lbs. The MP2 has a fixed bail loop integrated into the body of the shackle for easy attachment to a line or webbing. Ideal for dingy racing or light air conditions.



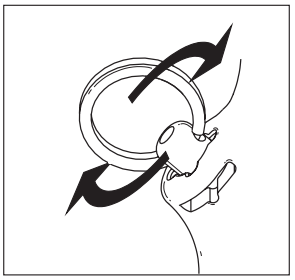
SHACKLE TYPE	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	THICKNESS in (mm)	WEIGHT oz (gm)	WORK LOAD lb (kg)	BREAKING STRENGTH lb (kg)
LP12	1.05 (23.0)	1.187(30.15)	0.75(19.05)	0.625 (15.87)	3.72 (94.46)	0.563 (14.3)	4.5 (127)	6,000 (2,727)	12,000 (5,455)
MP2	0.437 (11.1)	0.563(14.3)	0.313(7.94)	0.28 (7.14)	1.375 (34.9)	0.275 (6.99)	0.5 (14)	1,000 (454)	2,000 (909)

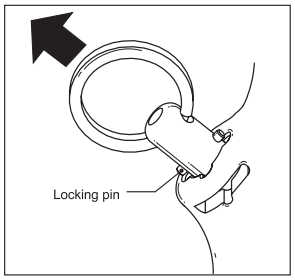
HOW THE LOCKING PULL PIN WORKS ON LP12



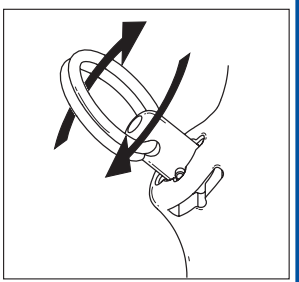


Pull-pin in locked position


Lift and rotate pull-pin ninety degrees



Lift pull-pin until locking pin clears case


Rotate pull-pin ninety degrees to allow locking pin to snap into divits

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SPINNAKER PEEL
Linked Shackles

WELDED RING VERSION

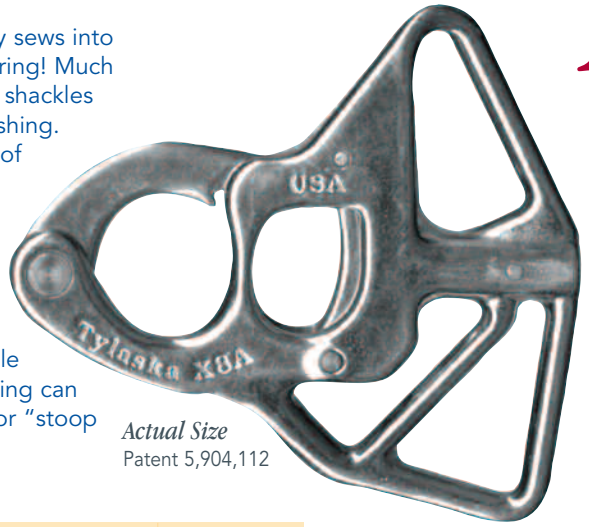
Tylaska shackles are also available as a stock item joined together at the bails. This arrangement is ideal for temporarily holding the guy during a running spinnaker change or "peel" as it is sometimes called. Two Tylaska trigger shackles are then fitted to the linked bail to produce a "peeling strop" or "handcuffs" as they are often nicknamed. Other configurations available upon request including welded ring versions and individual linked bails.

STANDARD VERSION

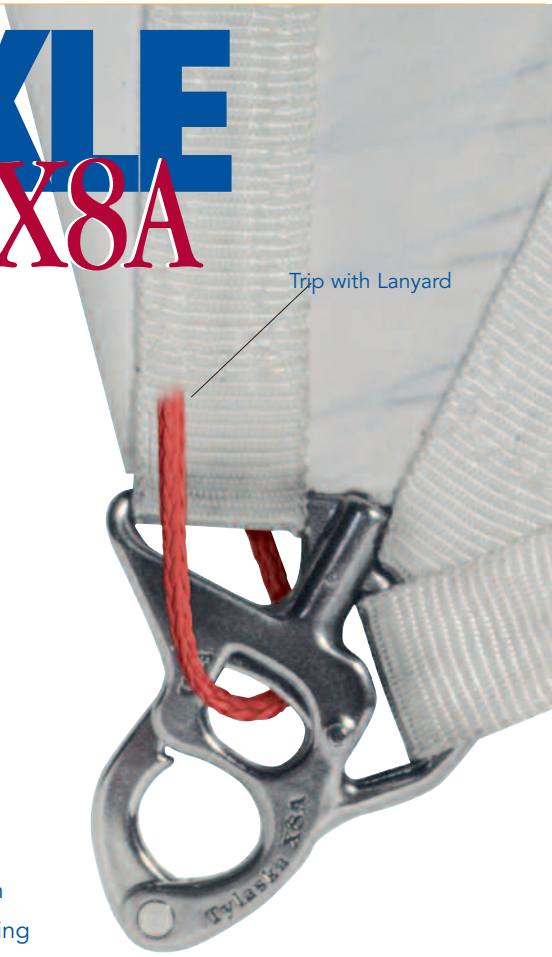
SHACKLE TYPE	T5	T8	T12	T20	T30
WEIGHT oz (gm)	4.5 (119)	7.3 (193)	11.7 (318)	23.8 (676)	52.9 (1,273)
WORK LOAD lb (kg)	2,500 (1,136)	4,000 (1,818)	6,000 (2,727)	10,000 (4,545)	15,000 (6,818)
BREAKING STRENGTH lb (kg)	5,000 (2,273)	8,000 (3,636)	12,000 (5,455)	20,000 (9,091)	30,000 (13,636)

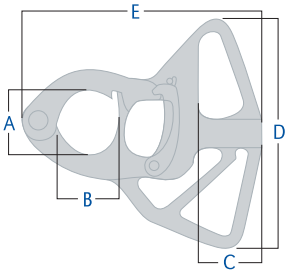
TACK SHACKLE
X8A

Revolutionary new design actually sews into the tack of a jib in place of a sail ring! Much easier to install than normal snap shackles without the need for extensive lashing. Mounting lugs formed into sides of shackle allow it to be easily sewn into sail tack, firmly securing shackle to sail to prevent shifting and twisting that occurs with regular shackles. Standard 1" webbing fits snugly into rounded lugs to prevent chafing. Releasable under load. Lanyard line or webbing can be looped through trigger hole for "stoop free" easy release.



Actual Size
Patent 5,904,112





SHACKLE TYPE	X8A Sew In
A in (mm)	11/16 (17.5)
B in (mm)	21/32 (16.7)
C in (mm)	13/16 (20.6)
D in (mm)	2 11/16 (68.3)
E in (mm)	2 7/8 (73)
WEIGHT oz (gm)	3.6 (94)
WORK LOAD lb (kg)	4,000 (1,818)
BREAKING STRENGTH lb (kg)	8,000 (3,636)

- Easy to Install
- One Hand Operation
- Releasable Under Load
- 8,000 lb Break Strength
- Fits Standard 1" Webbing
- Stays in Place without Shifting

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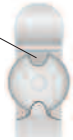
J-LOCK Shackles

Easily spliced onto Genoa sheets, outhauls and halyards, the low-profile Tylaska J-Locks fit through most Genoa blocks for fast sheet changes. Unique patented double-locking plunger locks in two directions for the ultimate in flog-free operation.

UNLOCKED POSITION
J-Lock opens only when the knob is rotated so that its notch is aligned with the body's tab.

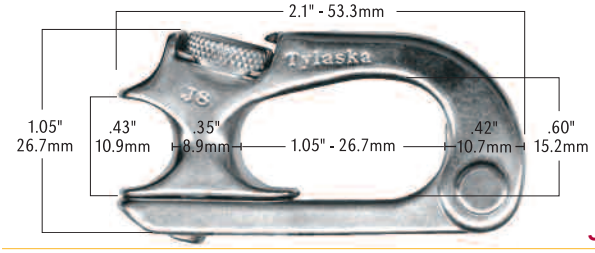
Top view of J-Lock Shackle

LOCKED POSITION
The notch in the knob is turned away from the tab on the body and seated on the keyway shown below.

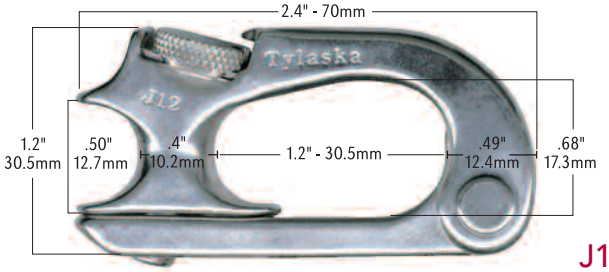


Keyway prevents knob from rotating.

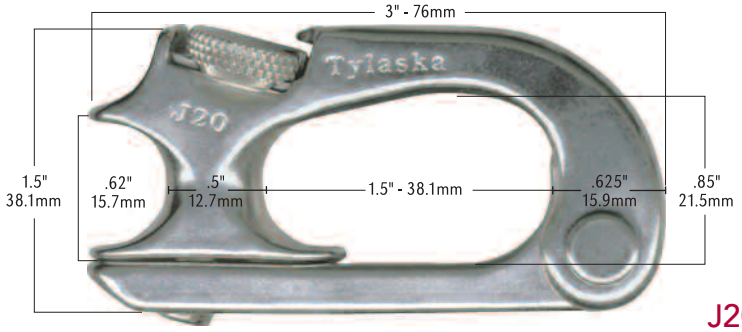
Side View of Keyway



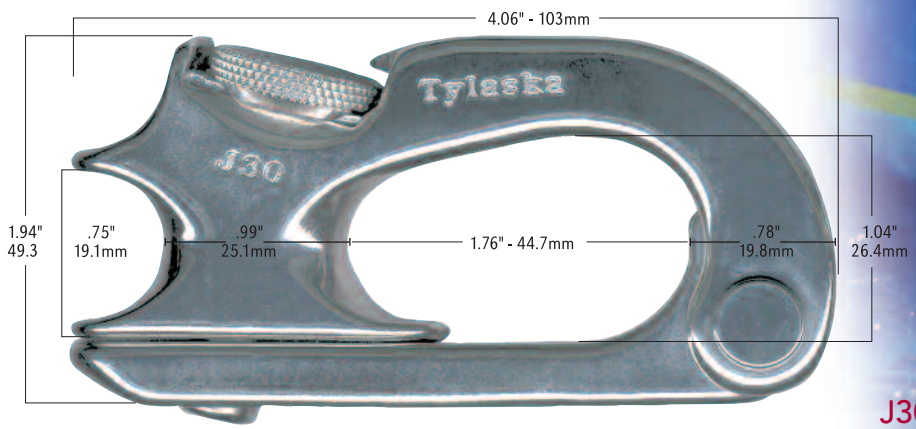
J8



J12



J20



J30

"Knob" type pull pin

Structural protrusion for added strength

J-Locks Shown Actual Size Patent 6,539,885

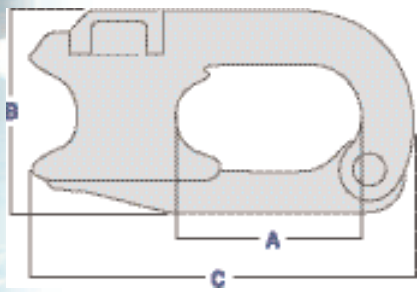
SHACKLE TYPE	J8	J12	J20	J30
WEIGHT oz (gm)	1.9 (54)	3.0 (82)	5.9 (159)	14.6 (371)
WORK LOAD lb (kg)	4,000 (1,818)	6,000 (2,727)	10,000 (4,545)	15,000 (6,818)
BREAKING STRENGTH lb (kg)	8,000 (3,636)	12,000 (5,455)	20,000 (9,091)	30,000 (13,636)
LINE SIZE	8-10mm	10-12mm	12-16mm	14-20mm

PRESS LOCK

As an alternative to Tylaska's J-Lock style shackle, the press lock serves the same purpose with a different design. Two opposing triggers are pressed to open the shackle. Both opposing triggers must be pressed at the same time to open the shackle which safeguards against accidental opening during flogging. Investment cast and then hipped in aerospace 17-4PH stainless, the Press Lock Junior and Senior are held to the same high standards as our snap shackles. Designed to be strong and light, yet provide easy use in those tight mark roundings, they have proven to be up to the task. Their opposing trigger mechanism is ideal for sheets and other applications requiring a fitting small enough to pass through the lead cars to make re-leading a sheet easier. They are also used for halyards, outhauls and lead changers.

JR
Actual Size

SR
Actual Size



The Press Lock Junior is perfect for boats 24 to 40 feet LOA and has been seen widely on the Farr 40s. The Press Lock Senior also is a tried and true veteran. Commonly found on America's Cup boats and maxi boats, these have stood the test of time. These shackles can cover boats from 40 to 80 feet LOA.

PRESS LOCK	A in	B in	C in	WEIGHT oz	WORK LOAD lb	BREAKING STRENGTH	MAX LINE SIZE
Press Lock Jr	1.250	1.000	2.312	2.3	4,650	9,300 lb	3/8"
Press Lock Sr	1.250	1.375	2.750	5.8	10,000	20,000 lb	5/8"

SP6

Tylaska has revived the old and proven trigger release snap shackle from races of the past. New molds, closer tolerances and some needed design modifications have allowed the #6 to breath new life and once again sail with the best. Now called the Tylaska SP6, this is the same shackle that has had its place in every major yachting event since its creation. This light, strong and reliable shackle has been the solution on boats up to 50 ft. Made from the same durable 17-4PH stainless as before, the castings are now hipped to create a finished part similar to a forging in strength and metal consistency.

SP6- Actual Size

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SP10

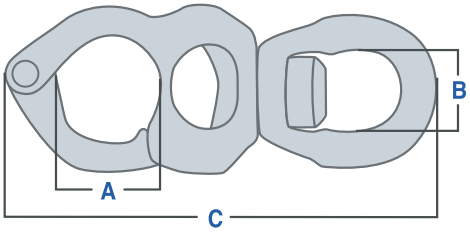
Tylaska has also revived the old #10 snap shackle and has renamed the time proven design the Tylaska SP10. From the windy waters off Sardina to the rough and trying seas for 12-Meters off of Freemantle, the #10 has been there. This shackle has been the workhorse of most major races for decades. Made from investment cast and hipped 17-4PH stainless and suitable for boats 50' to 100'.

SP10- Actual Size

SP15

The Tylaska SP15 Snap Shackles was driven by lower-stretch materials, in particular the loads generated by code Zero headsails. This product serves as a dependable solution to larger cruising boats in the 100'+ range.

SP15- Actual Size



SHACKLE TYPE	A in	B in	C in	WEIGHT oz (lb)	WORK LOAD lb	BREAKING STRENGTH
SP6	0.625	0.688	4.125	5.5 (0.34)	6,000	12,000 lb
SP10	0.875	0.875	5.000	11.4 (0.64)	10,000	20,000 lb
SP15	1.500	1.060	6.000	21.4 (1.33)	15,000	30,000 lb

SS10

Tylaska has made a new retrofit shackle to serve as a replacement for the old plunger style Sparcraft shackle. The Tylaska shackle follows the same basic profile dimensions of the classic Sparcraft shackle to allow for direct replacement, yet has been optimized with FEA to provide a slight increase in strength. The overall shackle is marginally longer so as to allow for a larger bail nut with a removable cross pin. This removable nut allows the option of using the shackle-head on specialized equipment. The hook pin has been improved using Tylaska's double cylinder design. Tylaska's double cylinder design is much less prone to falling apart under high wear use.

The Tylaska SS10 Snap Shackle comes in the standard bail configuration and is a high strength positive locking plunger pin shackle. It is designed for those applications not requiring it to be released under load.

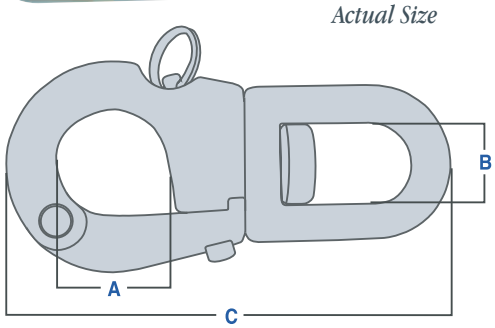
Actual Size

SS20

The Tylaska SS20 Snap Shackle is a larger high strength positive locking plunger pin shackle. It relies on a plunge pin for those applications that don't need the ability to be released under load. It has a breaking strength of 40,000 lbs., a working strength of 20,000 lbs. and comes in the standard bail configuration.

Actual Size

SHACKLE TYPE	A in	B in	C in	WEIGHT oz (lb)	WORK LOAD lb	BREAKING STRENGTH
SS10	0.80	1.01	4.50	25 (1.56)	10,000	20,000 lb
SS20	1.10	1.375	6.125	37 (2.25)	20,000	40,000 lb
SS40	1.75	2.17	9.67	142 (8.90)	40,000	80,000 lb



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SS40

The Tylaska SS40 Snap Shackle is the highest-load shackle in our line with a working strength of 40,000 pounds (18,181 kg) and a breaking strength of 80,000 pounds (36,364 kg). It relies on a massive plunger pin for those applications that don't need the ability to be released under load.

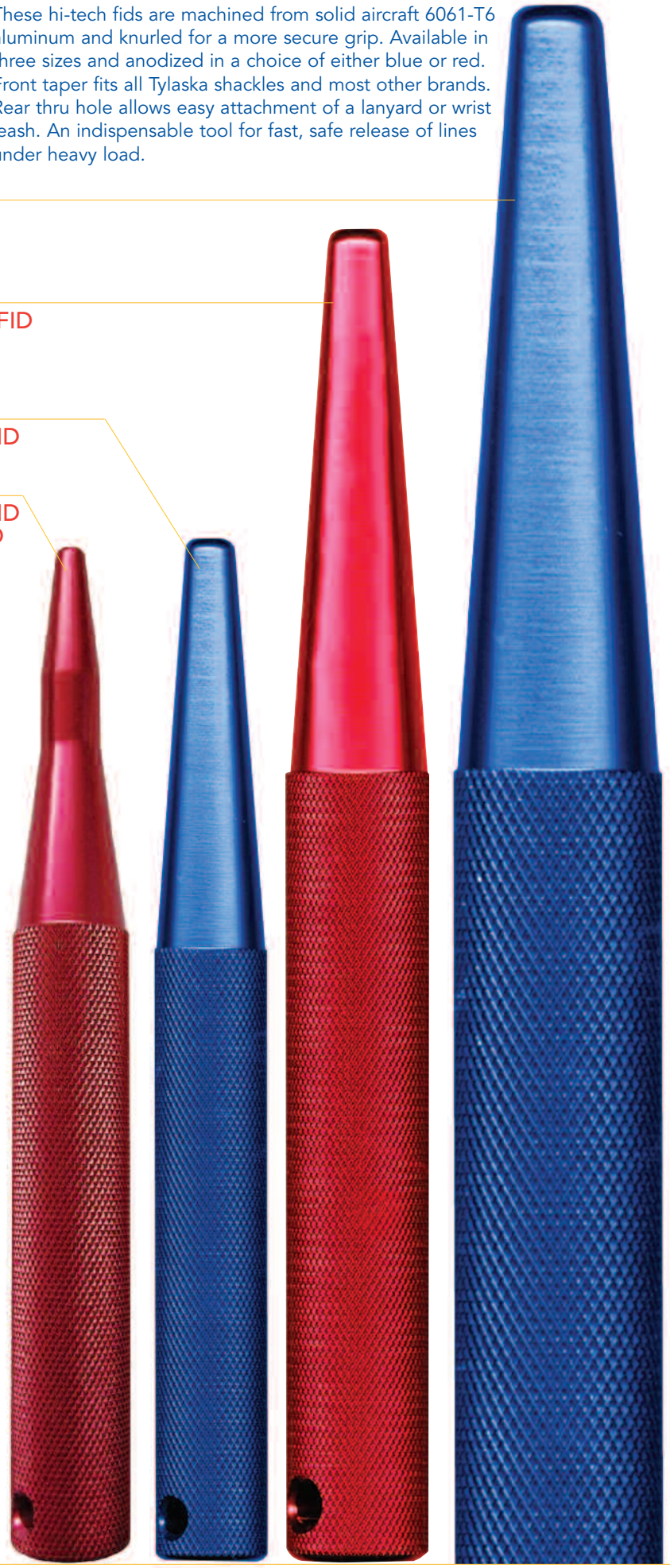
Actual Size

TYLASKA SHINE

Tylaska Marine Hardware has introduced a polish to easily remove rust stains from stainless steel. TYLASKA SHINE has been formulated to clean, polish, and protect stainless steel in just one application using very little paste and a soft cloth. TYLASKA SHINE is non-toxic, non-abrasive, and non-flammable. It works very well and has no bad odors. Remember, a little goes a long way.

FIDS

These hi-tech fids are machined from solid aircraft 6061-T6 aluminum and knurled for a more secure grip. Available in three sizes and anodized in a choice of either blue or red. Front taper fits all Tylaska shackles and most other brands. Rear thru hole allows easy attachment of a lanyard or wrist leash. An indispensable tool for fast, safe release of lines under heavy load.



Fids Shown Actual Size

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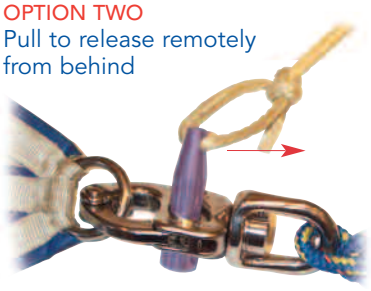
PLUG-FIDS

New plug fids allow for remote release of trigger shackles. The fid is pushed into the trigger hole and the tapered rear of the fid allows the trigger to snap closed again and hold the fid in place. A lanyard can then be placed in either of two locations depending upon the desired location of remote release. For side release, the lanyard is attached to the blunt end and can be pulled out either by hand or by winch. For rear release, the lanyard is attached to the tapered end and pulled from behind. The fid pries upon the trigger and stays captive with the shackle. Can also be used with no lanyard and operated as a 'handle' for convenient release. The plug fid is ideal for avoiding the need to crawl out into risky locations or for single-handed or night sailing.

OPTION ONE
Pull to release remotely from the side

As the plug fid is pulled, the taper pries the trigger open. Great remote side release.

OPTION TWO
Pull to release remotely from behind



Trigger is pried open, shackle is released, and fid remains captive

Fids Shown Actual Size

DUAL CAVITY DIE

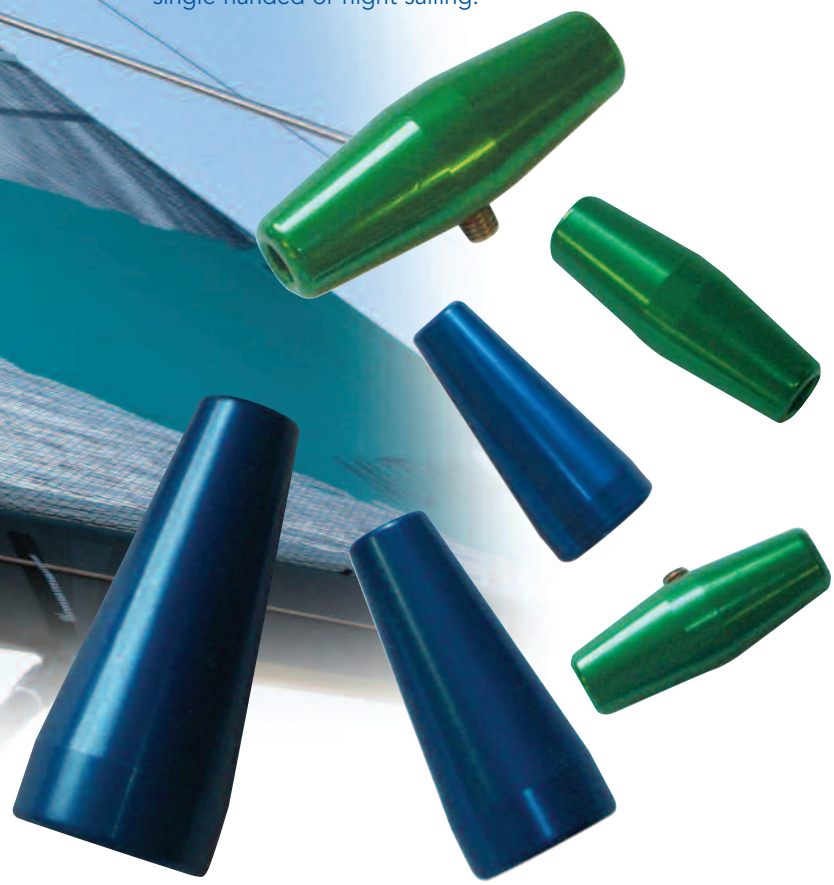
The Ultimate Installation Tool for Sailmakers and Canvas Shops

The Tylaska die makes easy work of installing turn button type fasteners. The precisely-spaced dual cavities allow two buttons or eyelets to be set at once. This eliminates the uneven or creased settings caused by setting each button or eyelet individually as with a standard single cavity die. Even when setting only one button or eyelet, the heavy weight and wide profile of the Tylaska die prevents it from continuously tipping over. Plus, unlike dies made of soft aluminum, the Tylaska die is made from 4140 chrome-moly steel and is virtually indestructible. It will most likely be the last die you will ever need.

CONE FIDS

The cone fid allows for remote release of the Tylaska trigger shackles. A lanyard is placed thru the center hole. The double cone fids come with a retaining screw to lock the lanyard in place. The single cone fids have a recessed area to accommodate a knot.

Both fids hang from the trigger area. When the lanyard is pulled, the fids engage the trigger, releasing the shackle. The double cone fid is designed to go thru the trigger area & separate from the shackle. The single cone fid is designed to stay in the trigger area & remain with the shackle. These fids are ideal for avoiding the need to crawl out into risky locations, for single handed or night sailing.



	Length	Hole Diameter	Line Size
Double Cone Fid 8		0.202″	3/16″
Double Cone Fid 12		0.242″	15/64″
Double Cone Fid 20		0.238″	15/16″
Single Cone Fid 5	0.93″	0.205″	3/16″
Single Cone Fid 8	1.35″	0.248″	15/64″
Single Cone Fid 12	1.75″	0.28″	1/4″
Single Cone Fid 20	2.22″	0.307″	5/16″

photos by Annapolis Performance Sailing

Tylaska Marine Hardware, 800 Flanders Road, Mystic, CT 06355 USA | Phone (860) 572-8440 | Fax (860) 572-0534 | www.Tylaska.com

FITTINGS

REACHING STRUT INBOARD END

RSIB – This item consists of two cast alloy bases to be mounted on both sides of the mast, and one toggle assembly with a quick release pin. This allows the pins to be removed and to jibe the fitting to the other side.

REACHING STRUT OUTBOARD END

RSOB – These cast alloy bodies with high-quality delrin sheaves are designed to handle the high-compression loads from a spinnaker afterguy. This one size fitting fits yachts from 30 to 80 feet LOA. Custom machined versions are available on a quotation basis. Standard diameter is 2.75 inches (70mm)"

SPINNAKER POLE PINS & TOGGLES

These bayonet pins are used to attach the spinnaker pole to the mast.The pin inserts into the Grand Prix and CR4 inboard ends.The pins are machined of high strength 17-4 PH stainless steel, and the toggles are investment cast of the same high strength material.

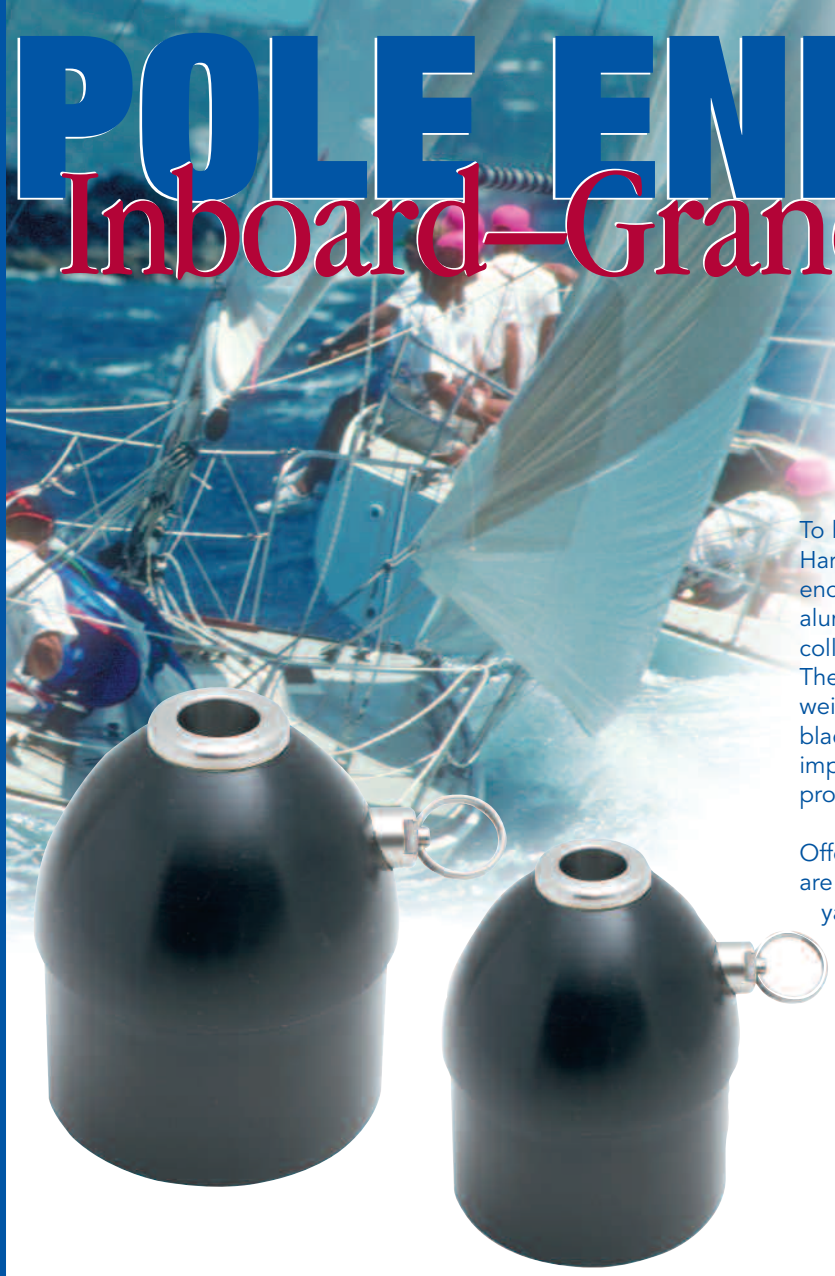
The toggles are available in 1/2" and 5/8". Custom hole sizes are available for the vertical pin. Commonly used for Harken cars and others, these pins are seen on yachts from 30 to 180 feet LOA.

ALUMINUM STUD PIN

	Item #
Bayonet Stud Pin	BTA
Stainless Toggle – bushed to 1/2"	T-1/2
Stainless Toggle – bushed to 5/8"	T-5/8
Bayonet Toggle Assembly w/1/2" Clevis	BTA-1/2
Bayonet Toggle Assembly w/5/8" Clevis	BTA-5/8
Aluminum Stud Pin	ASP

POLE ENDS

Inboard–Grandprix 3 & 4



To handle the highest compression loads, Tylaska Hardware offers a machined inboard spinnaker pole end – the Grand Prix. Machined of high strength aluminum alloy with a stainless steel load bearing collar and pin, these fittings meet the highest demands. The fitting interiors are hollowed out to further reduce weight. They have the beauty of hard coat anodized black for our customers where aesthetics is of high importance. Recent refinements lowered the pin's profile to avoid snagging the jib sheets during tacks.

Offered in 3" and 4" sizes. Custom machine diameters are also available. This fitting can provide the solution for yachts from 30 to 80 feet LOA.

	A	B
Grandprix 3	2.75″	2.835″
Grandprix 4	2.75″	3.800″
CR4 (Stubbie 4.0)	3.20″	3.800″
CR4.5 (Stubbie 4.5)	3.20″	4.300″

Inboard–Stubbie

The CR4 – affectionately known as the "stubbie" inboard end – is cast aluminum with hard coat anodizing and a stainless steel pin. This fitting is available for 4" pole fittings, like the Intrepid II. Custom adapters or sizes are available; provide dimensions and Tylaska Hardware will provide a quote to suit. This fitting is found on boats from 30 to 80 feet LOA.

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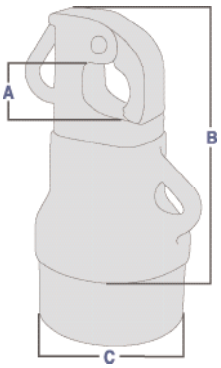
POLE ENDS

Outboard– Intrepid II

Tylaska has revived the proven and very durable Intrepid II spinnaker pole ends. Molds have been reworked, tolerances brought back to specs and problems repaired to make the Intrepid II pole ends even better than the original.

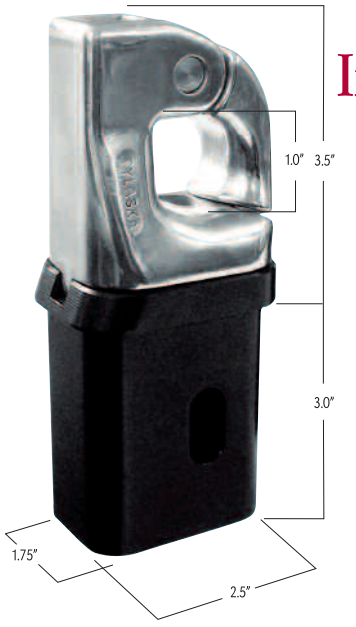
This fitting's life began as a design for the 12-Meter Intrepid. This simple and efficient design has under-gone refinements and is still competing at the highest levels. It is the standard pole end for the IACC yachts. From maxi boats, 50 footers and the elegant Nautor's Swans, the Intrepid II has done the job. Its unique trigger and latch mechanism serves as a reliable trusted friend at the front of the boat.

Its A356 aluminum body and investment cast 17-4 PH components make the pole end very rugged and strong. All investment cast parts are then hipped at several thousand atmospheres of pressure to produce a casting similar in strength and consistency to a forging. Made for boats from 50 feet and up, Tylaska Hardware offers a base 4" diameter with custom adapters available. Contact Tylaska Hardware and we'll be happy to quote a price.



	A	B	C
Intrepid II	1"	6.25"	3.8"

Intrepid II XD

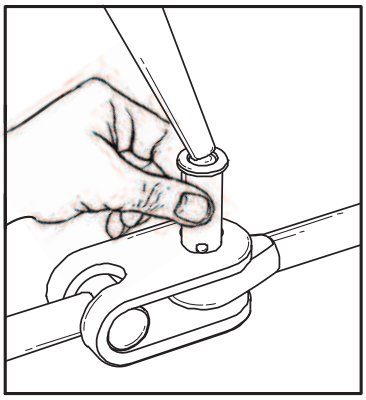


Tylaska Marine Hardware is pleased to introduce the new Intrepid II XD and Grand Prix XD square pole ends designed for use with rectangular profile carbon fiber spinnaker poles. It has the same locking mechanism as the original but with a smaller and lighter aluminum body. The inboard end weighs only 24 oz versus 48 oz for the Grand Prix 4 or 32 oz for the Grand Prix 3. The outboard pole end weighs only 50 ounces versus 65 ounces for the original Intrepid II.

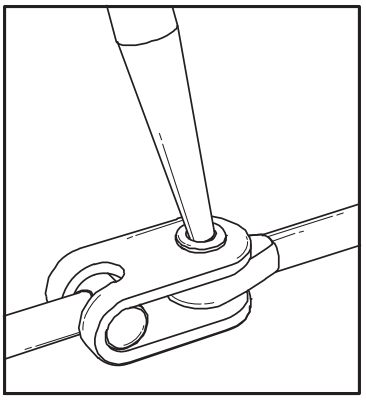
Grandprix XD

CLEVIS PIN Ball-Lock

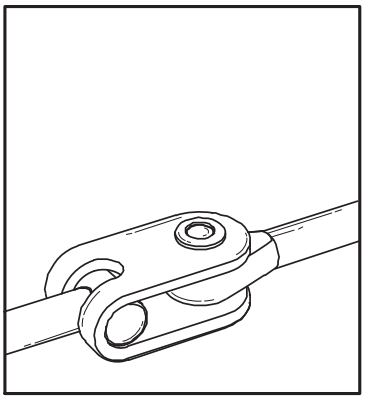
INSERTION



Guide clevis pin into clevis with hand while applying pressure to front button with a fid, screw driver or any pointed object.



Once button is sufficiently depressed, the clevis pin will slip into place.



Once in place, the ball-bearings will snap into a locked position and hold the clevis pin captive.

Tylaska Marine Hardware's new patented ball-lock clevis pins provide a direct replacement for standard clevis pins. Unlike traditional ball lock pins, the Tylaska ball lock clevis pin has no bulky handle and has a release button on both ends. This revolutionary pin eliminates the need for sharp cotter pins, bulky snap rings, and messy rigging tape, providing a smooth, snag-free connection that is easy to assemble and disassemble. The clevis pins are constructed out of a hardened and electro-polished 17-4 stainless steel alloy, which allows for comparable strength to standard 316 stainless steel clevis pins.

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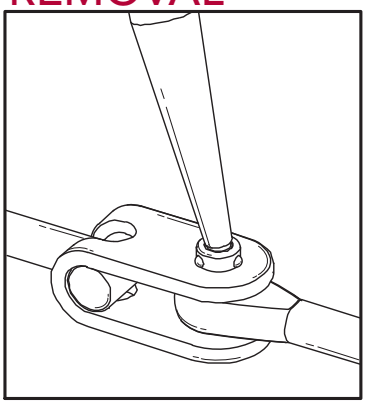
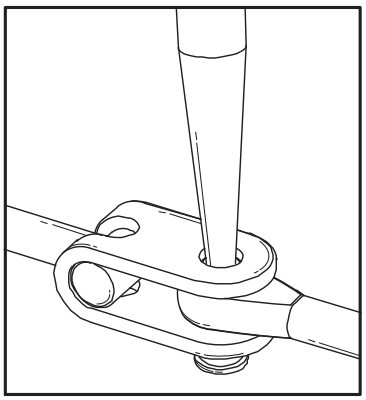
CLEVIS PIN
Ball-Lock

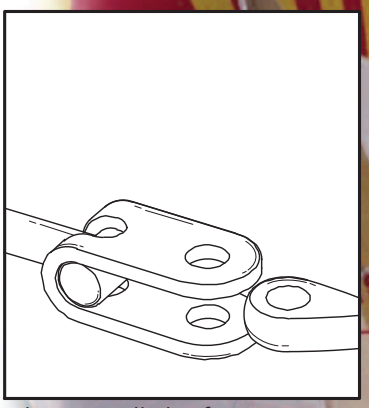
REMOVAL



Apply pressure to rear button on opposite end of clevis pin with a fid, screw driver or other pointed tool.



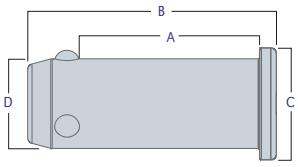
Push pin through until balls are released.



The pin will slip free.

Tylaska's ball-lock clevis pins utilize three ball bearings at the end of the pin to hold the clevis pin captive. In their at-rest state, the ball bearings are locked in a protruded position, holding the pin captive in the same way a cotter pin would. Depressing a button recessed in the head of the pin permits the ball bearings to drop into the pin, allowing the pin to be easily inserted into a clevis. A second button on the opposite end of the pin can be used in the same fashion for easy removal and allows the use of a hammer and punch to dislodge the pin if it is ever corroded or stuck. A standard fid or other spike can also be used to depress the buttons. The buttons use stiff springs to ensure that the pins will not easily dislodge themselves under heavy flogging or shock. The release buttons are also recessed to ensure that the pins resist accidental release when bumped or struck by other objects.

Available in a variety of standard sizes, these clevis pins are completely interchangeable with standard clevis pins. They are ideal for any clevis pin application where snap rings and cotter pins pose a hazard to crew and equipment and where quick removal may be necessary.



Don't see the pin size you need listed? Call or check our website to inquire about other standard imperial, metric or custom sizes.

Nominal Diameter	Grip Length	A in (mm)	B in (mm)	C in (mm)	D in (mm)	Part Number
5/16"	9/16"	0.563 (14.3)	0.821 (21.1)	0.432 (11.0)	0.311 (7.9)	BL313-563
	11/16"	0.688 (17.5)	0.946 (24.3)			BL313-688
	3/4"	0.75 (19.1)	1.008 (25.9)			BL313-750
	1"	1.00 (25.4)	1.258 (32.2)			BL313-1000
	1 1/4"	1.25 (31.8)	1.508 (38.6)			BL313-1250
3/8"	5/8"	0.625 (15.9)	0.904 (23.0)	0.495 (12.6)	0.373 (9.5)	BL375-625
	13/16"	0.813 (20.7)	1.092 (27.7)			BL375-813
	1"	1.00 (25.4)	1.279 (32.5)			BL375-1000
	1 1/4"	1.25 (31.8)	1.529 (38.8)			BL375-1250
	1 1/2"	1.50 (38.1)	1.779 (45.2)			BL375-1500
1/2"	3/4"	0.75 (19.1)	1.127 (28.6)	0.620 (15.7)	0.497 (12.6)	BL500-750
	1"	1.00 (25.4)	1.377 (35.0)			BL500-1000
	1 1/4"	1.25 (31.8)	1.627 (41.3)			BL500-1250
	1 1/2"	1.50 (31.8)	1.877 (47.7)			BL500-1500
5/8"	1"	1.00 (25.4)	1.441 (36.6)	0.745 (18.9)	0.622 (15.8)	BL625-1000
	1 1/4"	1.25 (31.8)	1.691 (43.0)			BL625-1250
	1 1/2"	1.50 (38.1)	1.941 (49.3)			BL625-1500
	1 3/4"	1.75 (44.5)	2.191 (55.7)			BL625-1750

SPOOL Shackles

Patent Pending

This revolutionary, patented, shackle from Tylaska replaces the age-old knot! Unlike a conventional knot, the Tylaska Spool Shackle™ will not jam up and remains easy to fasten and unfasten even after loading up to the tensile strength of the line.

The S-Series Tylaska Spool Shackle™ is machined from high-strength aluminum. The P4 version of the Tylaska Spool Shackle™ is made of high-impact polycarbonate. Both versions have an exceptional strength-to-weight ratio. The key is that the line itself supplies the strength while the shackle simply redirects the force. The ease of unfastening after loading is equally amazing. Based upon the concept of "breaking the back" of a bowline knot, the line can be rolled back and taken off even after it becomes "stiff as a wire" from tension.

The Tylaska Spool Shackle™ works with both conventional and hi-tech lines. All that is needed is a looped end. This can be a pre-spliced loop, yet-to-be spliced loop, or simply an overhand knot loop. A retaining pin allows for the shackle to be removed or transferred to other lines. An optional "O" ring slides over the line to provide a secondary "lock" against loosening during the most severe flogging situations.

- Ideal for Halyards, Genoa Sheets, etc.
- Tremendous Strength
- Flog-Proof
- Easy to Fasten and Unfasten
- Will Not Jam Up

S2

S3

S5

S8

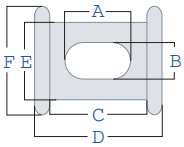
All Spool Shackles Shown Actual Size

Tylaska Marine Hardware, 800 Flanders Road, Mystic, CT 06355 USA | Phone (860) 572-8440 | Fax (860) 572-0534 | www.Tylaska.com

S12

P4 HIGH-IMPACT POLYCARBONATE PLASTIC SPOOL SHACKLE

S20



A Keeper Pin and "O" Ring come with each spool shackle in its corresponding size.

S30

All Spool Shackles Shown Actual Size

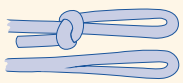
SHACKLE TYPE	S2	S3	S5	S8	S12	P4	S20	S30
A SLOT LENGTH in (mm)	.39 (9.9)	.522 (13.3)	.57 (14.5)	.713 (18.1)	.91 (23.1)	.91 (23.1)	1.159 (29.4)	1.787 (45.4)
B SLOT WIDTH in (mm)	.177 (4.5)	.238 (6.1)	.281 (7.1)	.343 (8.7)	.438 (11.1)	.438 (11.1)	.563 (14.3)	.813 (20.7)
C INSIDE LENGTH in (mm)	.548 (13.9)	.77 (19.6)	.875 (22.2)	1.063 (27)	1.312 (33.3)	1.312 (33.3)	1.677 (42.6)	2.5 (63.5)
D OVERALL LENGTH in (mm)	.673 (17.1)	.926 (23.5)	1.062 (27)	1.313 (33.4)	1.562 (39.7)	1.562 (39.7)	1.99 (50.5)	2.938 (74.6)
E DIAMETER in (mm)	.413 (10.5)	.574 (14.6)	.71 (18)	.766 (19.5)	1.032 (26.2)	1.032 (26.2)	1.329 (33.8)	1.9 (48.3)
F FLANGE DIAMETER in (mm)	.53 (13.5)	.75 (19.1)	.9 (22.9)	1 (25.4)	1.326 (33.7)	1.326 (33.7)	1.705 (43.3)	2.485 (63.1)
WEIGHT oz (gm)	.1 (2.8)	.3 (8.5)	.5 (14.2)	.75 (21.3)	1.6 (45.5)	.8 (22.7)	3.4 (96)	10.8 (307)
WORK LOAD lb (kg)	1,000 (454)	1,500 (682)	2,500 (1,135)	4,000 (1,818)	6,000 (2,727)	2,200 (1000)	10,000 (4,545)	15,000 (6,5818)
BREAKING STRENGTH lb (kg)	2,000 (909)	3,000 (1,364)	5,000 (2,273)	8,000 (3,636)	12,000 (5,455)	4,400 (2000)	20,000 (9,091)	30,000 (1,363)
LINE SIZE in (mm)	⅛ (3)	⅛ - 5⁄32 (3-4)	3⁄16 (5)*	¼ (6)*	5⁄16 - ⅜ (8-10)*	5⁄16 - ⅜ (8-10)	⅜ - 7⁄16 (10-11)*	½ - ¾ (12-18)*

*S5 can fit some weaves of 6mm | S8 can fit some weaves of 8mm | S12 can fit many weaves of ⅜" and some weaves of 10mm
S20 can fit most weaves of 12mm and some weaves of ½" | S30 can fit some weaves of 20mm
P4 is made from high-impact polycarbonate plastic.

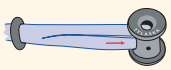
DIRECTIONS

TO ATTACH

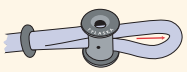
1 Begin with a loop - tied or spliced.



2 Push loop into slot in Spool Shackle.

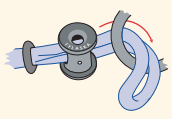


3 Pull loop through Spool Shackle.

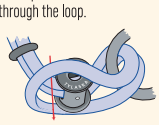


4 (Optional) Insert keeper pin. This secures Spool Shackle to line.

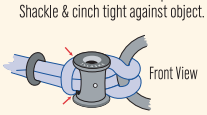
5 Wrap loop around object.



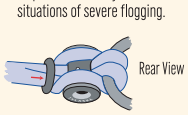
6 Pass Spool Shackle through the loop.



7 Secure line behind ears of Spool Shackle & cinch tight against object.

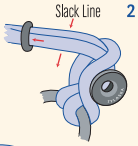


8 (Optional) Slide "O" ring against loop as a secondary "lock" in situations of severe flogging.

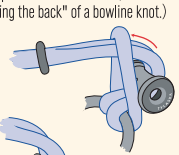


TO REMOVE

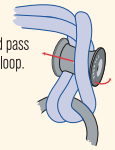
1 Slide "O" ring away from loop. Bend slack line backward around spool diameter.



2 Roll loop back over slack line. (Similar to "breaking the back" of a bowline knot.)



3 Turn spool and pass back through loop.



4 Line is now free from object.

HALYARD Shackles

FIXED THIMBLE STYLE

Tylaska's halyard shackles have the highest strength-to-weight ratio of any existing halyard shackle on the market. A captive 17-4PH stainless pin makes for trouble-free operation. The all-metal machined line thimble allows for use as a 2-1 purchase without the wear or melting that occurs with plastic molded thimbles. Lines can also be permanently spliced for a fixed halyard.

H5

WORK LOAD 2,500 lb (1,136 kg)
BREAKING STRENGTH 5,000 lb (2,273 kg)
WEIGHT 1.4 oz (36.9 gm)
LINE SIZE 5/16" (8 mm)

H8

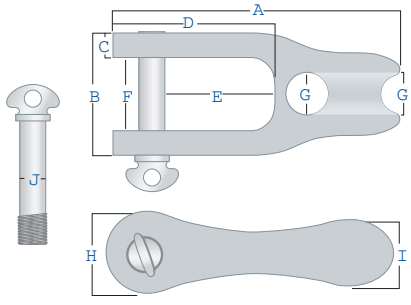
WORK LOAD 4,000 lb (1,818 kg)
BREAKING STRENGTH 8,000 lb (3,636 kg)
WEIGHT 3.1 oz (87.7 gm)
LINE SIZE 3/8"- 1/2" (10-12 mm)

H12

WORK LOAD 6,000 lb (2,727 kg)
BREAKING STRENGTH 12,000 lb (5,455 kg)
WEIGHT 4.8 oz (127.8 gm)
LINE SIZE 7/16"- 1/2" (12 mm)

H20

WORK LOAD 10,000 lb (4,545 kg)
BREAKING STRENGTH 20,000 lb (9,091 kg)
WEIGHT 10.6 oz (272.7 gm)
LINE SIZE 1/2"- 5/8" (16 mm)



All Halyard Shackles Shown Actual Size

SHACKLE TYPE - in (mm)	H5	H8	H12	H20	2:1 H5	2:1 H8	2:1 H12	2:1 H20
A - OVERALL LENGTH	2.57 (65.3)	3.15 (80.0)	3.76 (76.2)	4.84 (122.9)	2.93 (74.4)	3.32 (84.3)	4.08 (103.6)	5.25 (133.4)
B - OVERALL WIDTH	1 (25.4)	1.315 (33.4)	1.505 (38.2)	1.833 (46.5)	1 (25.4)	1.315 (33.4)	1.505 (38.2)	1.833 (46.5)
C - EAR THICKNESS	.183 (4.6)	.281 (7.1)	.313 (8)	.416 (10.6)	.183 (4.6)	.281 (7.1)	.313 (8)	.416 (10.6)
D - OVERALL THROAT LENGTH	1.40 (35.6)	1.50 (38.1)	2.00 (50.8)	2.50 (63.5)	1.40 (35.6)	1.50 (38.1)	2.00 (50.8)	2.50 (63.5)
E - EFFECTIVE THROAT LENGTH	.91 (23.1)	.85 (21.6)	1.20 (30.5)	1.44 (36.6)	.91 (23.1)	.85 (21.6)	1.20 (30.5)	1.44 (36.6)
F - INSIDE THROAT WIDTH	.64 (16.1)	.76 (19.3)	.88 (22.4)	1 (25.4)	.64 (16.1)	.76 (19.3)	.88 (22.4)	1 (25.4)
G - THIMBLE GROOVE WIDTH	.375 (9.5)	.56 (14.2)	.563 (14.3)	.75 (19.1)	.51 (13.0)	.63 (16.0)	.72 (18.3)	.88 (22.4)
H - OVERALL EAR HEIGHT	.75 (19.1)	1.00 (25.4)	1.19 (30.1)	1.58 (40.1)	.75 (19.1)	1.00 (25.4)	1.19 (30.1)	1.58 (40.1)
I - OVERALL THIMBLE HEIGHT	.75 (19.1)	1.06 (26.9)	1.125 (28.6)	1.499 (38.1)	.99 (25.1)	1.24 (31.5)	1.44 (36.6)	1.80 (45.7)
J - PIN MINIMUM DIAMETER	.26 (6.6)	.32 (8.1)	.375 (9.5)	.5 (12.7)	.26 (6.6)	.32 (8.1)	.375 (9.5)	.5 (12.7)

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HALYARD Shackles 2:1

TRUE 2:1 SHEAVED SHACKLES

Using a high strength composite sleave bearing, Tylaska has created true 2-1 halyard shackles capable of handling the full rated load of the shackle. The size was made to fit standard sail headboards without adding any unnecessary weight. Strength was optimized by computer and then verified by numerous "make and break" destructive tests.

2:1 H5

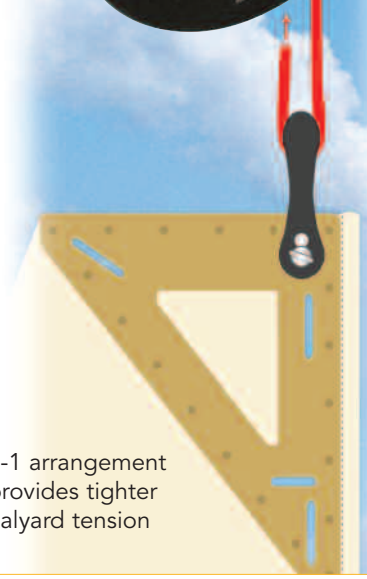
WORK LOAD 2,500 lb (1,136 kg)
BREAKING STRENGTH 5,000 lb (2,273 kg)
WEIGHT 2.3 oz (65.2 gm)
LINE SIZE 7/16" (10 mm)

2:1 H8

WORK LOAD 4,000 lb (1,818 kg)
BREAKING STRENGTH 8,000 lb (3,636 kg)
WEIGHT 3.9 oz (110.6 gm)
LINE SIZE 9/16" (14 mm)

2:1 H12

WORK LOAD 6,000 lb (2,727 kg)
BREAKING STRENGTH 12,000 lb (5,455 kg)
WEIGHT 6.3 oz (178.6 gm)
LINE SIZE 5/8" (16 mm)



2-1 arrangement provides tighter halyard tension

2:1 H20

WORK LOAD 10,000 lb (4,545 kg)
BREAKING STRENGTH 20,000 lb (9,091 kg)
WEIGHT 13.3 oz (377.0 gm)
LINE SIZE 7/8" (22 mm)

COMING SOON!

90° 2:1 Halyard

Split 2:1 Halyard

Tylaska

MARINE HARDWARE

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