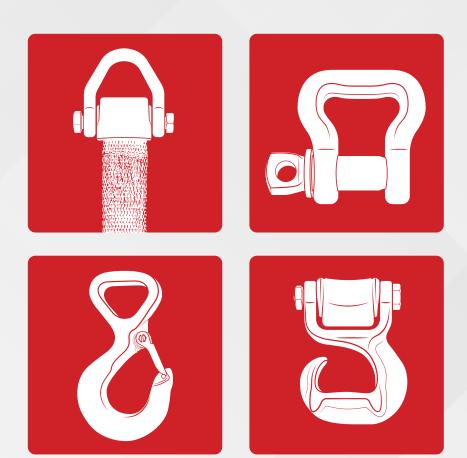
# SYNTHETIC SLING FITTINGS

Steel end fittings designed to be used on synthetic web slings to increase usability & durability.



the **Grosby** group

thecrosbygroup.com



### **APPLICATION INFORMATION**

Crosby's Sling Saver<sup>®</sup> line is the first broad line of fittings developed exclusively for use with synthetic slings. Combined with additional Crosby products, a complete system is now available.

APPLICATION	USE	
Web slings, connect to pad eye, eye bolt, or lifting lug.	S-281 Sling Saver Web Sling Shackle	
Web slings or roundslings, connecting to pad eye, eye bolt, or lifting lug.	S-253 or S-252 Sling Saver Shackle	DD.
Connect two S-252 or S-253 Sling Saver shackles together.	S-256 Link Plate	• •
To keep the load centered on the pin, thus keeping the sling positioned correctly in the shackle bow.	S-255 Spool	
Web slings or roundslings connecting to master links, rings, or Crosby 320N Eye Hooks.	S-280 Sling Saver Web Connector with spool	
High strength, high capacity web or roundslings.	WSL-320A Synthetic Sling Hook	3
Choking with web slings or roundslings.	S-287 Sliding Choker Hook	3
Master links or master link assembly to be sewn into eye of web sling or attached utilizing web connector.	Welded Master Link A-1343 and Master Link Assembly A-1346	02
Master links or master link assembly to be sewn into eye of web sling or attached utilizing web connector.	Welded Master Link A-342 and Master Link Assembly A-345	08
Connecting high performance slings to master links or eye hooks and to other high performance slings.	S-237 or S-238 High Performance Connectors	88
Wide body shackles greatly improve wearability of wire rope slings.	S/G-2160 Wide Body Bolt Type Shackles S/G-2169 Wide Body Screw Pin Shackles	$\Omega \Omega$

Always ensure rated Working Load Limits are greater than the load placed on the fitting. Designed for use with Type III (eye & eye), Class 7, 2-ply webbing, and synthetic round slings. Also accommodates single ply and endless slings.

Crosby Sling Saver hardware meets the requirements for minimum stock diameter or thickness and effective contact width shown in the recommended standard specification for synthetic polyester round slings by the Web Sling and Tie Down Association. WSTDA-RS1 (revised 2010).



#### SYNTHETIC SLING FITTINGS

#### S-280





- All alloy construction.
- Durable vinyl cover that:
  - · Protects sling at eye
  - · Keeps sling positioned correctly on spool.
- · Makes a field assembled bridle quick and easy.
- No retaining pin to snag sling material.
- Increased radius of spool gives wider sling bearing surface resulting in an increased area for load distribution, allowing better load distribution on internal fibers.
- Increases synthetic sling efficiency as compared to standard anchor and chain shackle bows and conventional eye hooks. This allows 100% of the slings rated Working Load Limit to be achieved.
- Crosby Sling Saver hardware meets the requirements for minimum stock diameter or thickness, and effective contact width shown in the Recommended Standards Specification for Synthetic Polyester Round Slings by the Web Sling & Tie Down Association (WSTDA-RS1).
- Replacement kit for spool and web cover available.

S-280

Stock No.

1021681

1021690

1021700

1021709

 Designed for use with Type III (eye & eye), Class 7, 2-ply webbing and synthetic round slings. Also accommodates single ply and endless slings.

Weight

Each

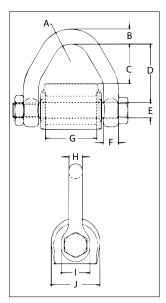
(lb)

1.5

1.9

2.9

5.1



#### S-280 Web Connector

Webbing

Width

(in)

2

3

4



.69

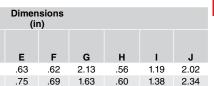
.88

1.62

1.88

2.46

2.84



2.13

3.13

D

2.44

2.01

2.56

3.50

.88

1.00

.75

.88

В

.62

.69

.81

.94

.75

.75

.75

1.00

С

1.63

1.10

1.66

2.47

5 & 6 Design Factor of 5:1.

Round

Sling

Size

(No.)

1 & 2

3

4

\* Designed for use with Type III, (eye & eye), Class 7, 2-ply web slings. For 3" and larger webbing width, tapered eye is required.

Working

Load

Limit

(Tons)†

3-1/4

4-1/2

6-1/4

8-1/2

† Maximum Proof Load is 2 times the Working Load Limit.

Web

Slings\*

Width

(in)

2

1.5

2

3

Ply

2

2

2

2

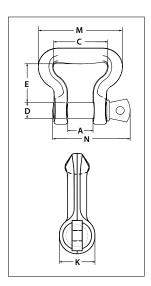


# **Crosby**

#### S-281



- Web Sling Shackle is designed to connect synthetic web slings and synthetic round slings to eyebolts, pad eyes, and lifting lugs.
- · All alloy construction.
- Each shackle has a Product Identification Code (PIC) for material traceability along with a Working Load Limit and the name Crosby forged into it.
- Incorporates the same ear spread and pin dimensions as conventional Crosby shackles. Allows easy connection to pad eyes, eye bolts, and lifting lugs.
- Meets or exceeds all requirements of ASME B30.26, including identification, ductility, design factor, proof load, and temperature requirements. Importantly, these shackles meet other critical performance requirements, including fatigue life, impact properties, and material traceability not addressed by ASME B30.26.
- Crosby Sling Saver hardware meets the requirements for minimum stock diameter or thickness, and effective contact width shown in the Recommended Standards Specification for Synthetic Polyester Round Slings by the Web Sling & Tie Down Association (WSTDA-RS1).
- · Look for the Red Pin®... The mark of genuine Crosby quality.



#### S-281 Web Sling Shackle



		Web lings*		Working					D	imensio (in)	ns		
Round Sling Size (No.)	Webbing Width (in)	Eye Width (in)	Ply	Load Limit (Tons)†	S-281 Stock No.	Weight Each (lb)	A	С	D	E	K	М	N
1 & 2	2	2	2	3-1/4	1021048	1.2	1.06	2.50	.75	1.62	1.22	3.84	3.34
3	3	1.5	2	4-1/2	1021057	1.5	1.25	2.00	.88	1.50	1.41	3.38	3.97
4	4	2	2	6-1/4	1021066	2.5	1.44	2.50	1.00	2.00	1.62	4.22	4.50
5 & 6	6	3	2	8-1/2	1021075	4.3	1.69	3.62	1.13	2.75	1.84	5.64	5.13

Design Factor of 5:1.

\*Designed for use with Type III, (eye & eye), Class 7, 2-ply web slings. For 3" and larger webbing width, tapered eye is required. † Maximum Proof Load is 2 times the Working Load Limit.

SYNTHETIC SLING FITTINGS

### Crosby'

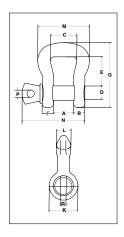
#### S-252





- All alloy construction.
- Each shackle has a Product Identification Code (PIC) for material traceability along with a Working Load Limit and the name Crosby forged into it.
- Increased radius of bow gives wider sling bearing surface resulting in an increased area for load distribution, allows better load distribution on internal fibers.
  - Increasing Synthetic Sling efficiency as compared to standard anchor and chain shackle bows and conventional hooks. This allows 100% of the sling's rated Working Load Limit to be achieved.
- Meets or exceeds all requirements of ASME B30.26, including identification, ductility, design factor, proof load, and temperature requirements. Importantly, these shackles meet other critical performance requirements, including fatigue life, impact properties, and material traceability not addressed by ASME B30.26.
- Crosby Sling Saver hardware meets the requirements for minimum stock diameter or thickness, and effective contact width shown in the Recommended Standards Specification for Synthetic Polyester Round Slings by the Web Sling & Tie Down Association (WSTDA-RS1).
- Bolt (pin) has a larger diameter that provides better load distribution.
- Look for the Red Pin®... the mark of genuine Crosby quality.





CE Sling Saver "Fallyon Robb" [Load Robb" MI

#### S-252 Bolt Type Sling Shackle

_		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	01.0.00														
	Web Sling Eye Width	Round Sling Size	Working Load Limit	S-252 Stock	Weight Each						Dim	ensions (in)	5				
	(in)	(No.)	(t)*	No.	(lb)	Α	В	С	D	E	F	G	Н	J	K	L	M
	1	1 & 2	3.25	1020485	1.4	1.06	.58	1.38	.75	1.50	.44	3.38	3.68	1.12	1.50	.75	2.69
	1.5	3 & 4	6.5	1020496	2.4	1.25	.75	1.75	.88	1.88	.50	4.15	4.25	1.31	1.81	1.00	3.38
	2	5 & 6	8.75	1020507	4.1	1.38	.88	2.25	1.00	2.81	.56	5.50	4.72	1.50	2.09	1.12	4.19
	3	7 & 8	12.5	1020518	8.0	1.62	1.12	3.25	1.25	3.06	.75	6.34	5.88	1.88	2.62	1.38	5.62
	4	9 & 10	20.5	1020529	16.9	2.12	1.38	4.50	1.50	5.25	.88	9.45	7.19	2.25	3.12	1.75	7.50
	5	11 & 12	35	1020540	35.0	2.50	1.75	5.50	2.00	6.34	1.12	11.50	9.31	3.00	4.19	2.25	9.19
	6	13	50	1020551	57.5	3.00	2.12	6.50	2.25	7.70	1.25	13.75	10.38	3.38	4.75	2.75	11.00

Design factor of 5:1.

#### S-253 Screw Pin Sling Shackle

Web										Dime	nsions	<b>i</b>				
Sling	Round Sling	Working Load	S-253	Weight						(	in)					
Eye Width (in)	Size (No.)	Limit (t)*	Stock No.	Each (lb)	A	В	С	D	E	G	K	L	М	N	Р	R
1	1 & 2	3.25	1020575	1.4	.88	.62	1.38	.75	1.50	3.38	1.50	.75	2.69	3.22	.44	1.00
1.5	3 & 4	6.5	1020584	2.2	1.25	.75	1.75	.88	1.88	4.15	1.81	1.00	3.38	4.03	.50	1.19
2	5 & 6	8.75	1020593	3.8	1.38	.88	2.25	1.00	2.81	5.50	2.09	1.12	4.19	4.50	.50	1.44
3	7 & 8	12.5	1020602	7.3	1.62	1.12	3.25	1.25	3.06	6.34	2.62	1.38	5.62	5.59	.62	1.81
4	9 & 10	20.5	1020611	15.2	2.12	1.38	4.50	1.50	5.25	9.45	3.12	1.75	7.50	6.88	.75	2.13
5	11 & 12	35	1020620	30.8	2.50	1.75	5.50	2.00	6.34	11.50	4.19	2.25	9.19	8.66	1.00	2.88
6	13	50	1020629	52.0	3.00	2.12	6.50	2.25	7.70	13.75	4.75	2.75	11.00	10.22	1.22	3.19

<sup>\*</sup> Maximum Proof Load is 2.5 times the Working Load Limit.

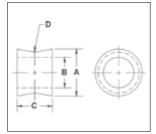


<sup>\*</sup> Maximum Proof Load is 2.5 times the Working Load Limit.

## **Crosby**



S-255



#### S-255 Spool

· Designed to keep the load centered on the pin, which keeps the sling positioned correctly in the shackle bow.

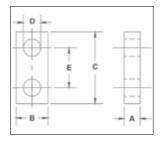
Working Load	S-255	Weight		Dimer (iı		
Limit (t)	Stock No.	Each (lb)	A	В	С	D
3.25	1020903	.33	1.25	.81	.75	.19
6.5	1020912	.57	1.50	.94	1.00	.25
8.75	1020921	.89	1.75	1.05	1.19	.31
12.5	1020930	1.45	2.00	1.31	1.50	.38
20.5	1020939	2.79	2.50	1.63	1.88	.44
35	1020948	2.40	3.25	2.13	2.25	.50
50	1020957	4.06	3.75	2.38	2.75	.62

<sup>\* 5:1</sup> Design Factor

CE



S-256



#### S-256 Link Plate

• Designed to connect two (2) S-252 or S-253 Sling Saver Shackles together.

Working Load	S-256	Weight			Dimensions (in)		
Limit (t)	Stock No.	Each (lb)	Α	В	С	D	E
3.25	1020785	.83	.75	1.50	3.38	.81	1.88
6.5	1020796	1.62	1.00	1.75	4.12	.94	2.25
8.75	1020807	2.71	1.25	2.00	4.75	1.06	2.62
12.5	1020818	5.18	1.50	2.50	6.00	1.31	3.37
20.5	1020829	8.19	1.75	3.00	7.00	1.62	3.75
35	1020840	17.19	2.00	4.00	9.25	2.12	5.00
50	1020851	3740	2 88	5 00	10.50	2 38	5.75

<sup>50</sup> \* 5:1 Design Factor



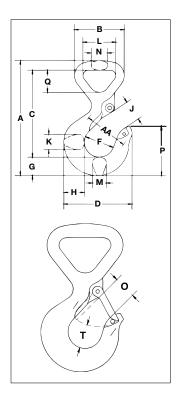
### Crosby'

#### SYNTHETIC SLING FITTINGS

#### **WSL-320A**



- Suitable for use with 2-Ply Web Slings and Round Slings.
  - Eye is designed with a wide beam surface, which eliminates bunching effects, reduces sling tendency to slide, and allows a better load distribution on internal fibers.
- All alloy construction.
- Each hook has a Product Identification Code (PIC) for material traceability along with a working load limit and the name Crosby forged into it.
- All hooks feature Crosby's patented QUIC-CHECK® indicators.
- Fatigue rated to 20,000 cycles at 1.5 times the Working Load Limit.
- Includes S-4320 latch.
- Crosby Sling Saver hardware meets the requirements for minimum stock diameter or thickness, and effective contact width shown in the Recommended Standards Specification for Synthetic Polyester Round Slings by the Web Sling & Tie Down Association (WSTDA-RS1).





#### **WSL-320A Synthetic Sling Hook**











Web Sling Eye Width (in)	Round Sling Size (No.)	Working Load Limit (t)	WSL-320A with Latch	Weight Each (lb)	Hook I.D. Code	S-4320 Rep. Latch
1"	1	1.5	1022706	1.10	FA	1096374
2"	2	3	1022717	2.86	HA	1096468
3"	3	5	1022728	6.60	IA	1096515

#### **WSL-320A Synthetic Sling Hook**

	-		_															
Hook ID	Working Load Limit								Di	mensio (in)	ns							
Code	(t)	Α	В	С	D	F	G	Н	J	K	L	M	N	0	Р	Q	Т	AA
FA	1.5	5.25	2.26	3.98	3.11	1.38	.84	.94	.93	.71	1.50	.63	.75	.91	2.24	1.01	.98	2.00
HA	3	7.11	3.66	5.31	3.97	1.63	1.13	1.32	1.13	.94	2.50	.85	1.13	1.09	2.82	1.69	1.16	2.00
IA	5	9.33	5.13	7.06	4.81	2.00	1.44	1.63	1.47	1.31	3.75	1.13	1.63	1.36	3.51	2.59	1.53	2.50

Design factor of 5:1.

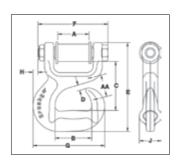
Maximum Proof Load is 2.5 times the Working Load Limit.

## **Crosby**

S-287



- Special design of hook protects the synthetic sling when dropped or dragged.
- Uses same spool and cover as S-280 Web Connector.
  - Replacement Kit for Spool and Web Cover available.
  - · No retaining pin to snag sling material.
- · Forged alloy steel, Quenched & Tempered.
- Each Connector has a Product Identification Code (PIC) for material traceability along with a Working Load Limit and the name Crosby forged into it.
- Designed to reduce friction, abrasion, and fraying in choker area.
- Designed for use with Type III, (eye & eye).
- Crosby Sling Saver hardware meets the requirements for minimum stock
  diameter or thickness, and effective contact width shown in the Recommended Standards Specification for
  Synthetic Polyester Round Slings by the Web Sling & Tie Down Association (WSTDA-RS1).



#### S-287 Sliding Choker Hook

QUIC-CHECK*	CE	Slin	g Saver	Load Rated	QT

		Veb lings										nsions n)				
Round Sling Size (No.)	Webbing Width (in)	Eye Width (in)	Ply	Working Load Limit (Tons)	S-287 Stock No.	Weight Each (lb)	A	В	С	D	Е	F	G	н	J	AA
1 & 2	2	2	2	3-1/4	1021909	3.7	2.13	2.50	3.32	.38	6.03	4.77	4.88	.34	1.50	1.50
3	3	1.5	2	4-1/2	1021918	6.1	1.63	3.50	3.67	.38	7.06	4.53	6.51	1.36	1.88	-

Design factor of 5:1.

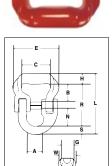
Maximum Proof Load is 2 times the Working Load Limit.

### Crosby'

#### SYNTHETIC SLING FITTINGS

#### S-237

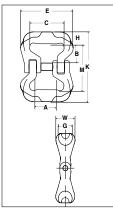




- High Performance Sling Connector is designed to connect to slings of all materials.
- Allows easy connection to master links or eye hooks and is ideal for bridles.
- Increased radius of bow gives wider sling bearing surface resulting in an increased area for load distribution, allows better load distribution on internal fibers.
  - · Increases synthetic sling efficiency as compared to master links, shackle bows and conventional eye hooks. This allows 100% of the sling's rated Working Load Limit to be achieved.
- All alloy construction
- Each connector has a Product Identification Code (PIC) for material traceability, along with a frame size and the name Crosby forged into it.
- Crosby Sling Saver hardware meets the requirements for minimum stock diameter or thickness, and effective contact width shown in the Recommended Standards Specification for Synthetic Polyester Round Slings by the Web Sling & Tie Down Association (WSTDA-RS1).







#### S-237 High Performance Sling Connector







	king Limit			Nominal Sling							Di	mensio (in)	ns				
4:1 (lb)*	5:1 (lb)	Stock No.	Fra me No.	Body Width (in)	Lok-A-Loy Size (in)	Weight Each (lb)	A	В	С	Е	G	н	L	N	R	s	w
6250	5000	1020695	5	2	3/8	1.14	.88	1.42	2.00	3.18	1.00	.80	4.20	1.04	2.92	.48	1.38
12500	10000	1020704	10	3	5/8	2.96	1.42	1.52	2.75	4.13	1.25	.98	5.68	1.71	3.94	.75	1.75
18750	15000	1020713	15	3	3/4	4.75	1.63	1.58	2.75	4.37	1.38	1.10	6.49	2.04	4.46	.93	1.88
31250	25000	1020722	25	4	7/8	8.59	2.00	2.33	3.75	6.00	1.75	1.41	7.97	2.27	5.51	1.06	2.25
37500	30000	1020731	30	4	7/8	9.24	2.00	2.20	3.75	6.19	1.75	1.41	7.84	2.27	5.38	1.06	2.38
50000	40000	1020740	40	5	1	15.7	2.25	2.91	4.75	7.25	2.25	1.78	9.45	2.44	6.45	1.22	3.09
75000	60000	1020759	60	6	1-1/4	26.0	2.56	3.36	5.75	9.13	2.31	1.86	11.08	3.07	7.72	1.50	3.16

Design Factor of 5:1.

Maximum allowable Proof Load is 2 times the Working Load Limit when used at 4:1 design factor.

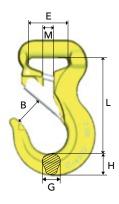
#### S-238 High Performance Sling Connector

Working			Nominal Sling					ı	Dimension (in)	s			
Load Limit (lb)	Stock No.	Frame No.	Body Width (in)	Weight Each (lb)	A	В	С	E	G	н	к	M	w
5000	1020415	5	2	1.6	.88	1.42	2.00	3.18	1.00	.80	4.90	3.30	1.38
10000	1020423	10	3	3.3	1.42	1.52	2.75	4.13	1.25	.98	5.72	3.76	1.75
15000	1020432	15	3	4.9	1.63	1.58	2.75	4.37	1.38	1.10	6.16	3.96	1.88
25000	1020441	25	4	10.1	2.00	2.33	3.75	6.00	1.75	1.41	8.40	5.58	2.25
30000	1020450	30	4	11.4	2.00	2.20	3.75	6.19	1.75	1.41	8.14	5.32	2.38
40000	1020469	40	5	20.7	2.25	2.91	4.75	7.25	2.25	1.78	10.48	6.92	3.09
60000	1020478	60	6	32.0	2.56	3.36	5.75	9.13	2.31	1.86	11.72	8.00	3.16

5:1 Design Factor







#### **Roundsling Hook RH**

The RH-hook is the perfect load connection solution, combining the advantages of both soft lifting slings and grade 100 components. It can be inserted into a softsling and is quicker and safer to use than the commonly used shackle. The RH-hook is a connector as well as a hook, which gives the user increased flexibility, safer use and increased durability of the soft slings.

The RH-hook comes with a blocking pin, but thanks to the narrow opening it may be used without blocking pin.

Stock No.	Code	WLL (lb)	В	E	G	L	н	М	Weight (lb)
B14490	RH-1-10	2204	0.94	1.37	0.65	3.30	0.74	0.31	1.10
B14491	RH-2-10	4500	1.10	1.57	0.66	3.77	0.86	0.39	1.54
B14492	RH-3-10	6612	1.29	1.85	0.94	4.60	1.18	0.47	2.86
B14493	RH-5-10	11020	1.69	2.87	1.06	6.10	1.41	0.64	7.05

4:1 Design Factor. Tested according to EN 1677-2.



The roundsling hooks are color coded in order to match the corresponding sizes of roundslings marked according to EN 1492: Red=5T, Yellow=3T, Green=2T and Violet=1T.

CE



### The SK-System

A range of specialized components for safe and easy assembly to chain, steel wire rope, webbing and roundsling, designed to solve your below-the-hook problems.

#### The Polyester Sling System provides:

- Universal coupling of components to chain, wire and synthetic slings.
- Quick and simple assembly (only a hammer needed).
- Easy assembly standardized dimensions within each size range effectively eliminates the incorrect assembly of components with different safe working loads.
- Heavy hoisting with strong yet lightweight equipment.
- All components are manufactured from alloy steel for use with Grade 8 chain.



#### SKA - pin & collar

The SKA set, containing pin and collar, can be used to connect all products in the SK-range. This creates a multitude of available combinations, each adaptable to the unique lifting situation.

The SKA set gives you flexibility. It can be disassembled and put in new combinations, providing solutions for a versatile lifting environment.



#### SKLI/SKLU

Electrically insulated, lubricated, sealed roller bearing swivel. Fully rotational even at maximum load. Tested to resist 1000 V. Suitable for protection of overhead cranes during welding operations on suspended loads.

By using the SKLI/SKLU with the SKsystem you get a versatile solution that will fit almost any situation.





#### **Rapid Rescue Chain Kits**

A few seconds can make a significant impact in a serious accident rescue operation. The vehicle construction and extreme deformations common in accidents make the work of emergency workers increasingly more difficult. The use of Gunnebo Industries' chain rescue kit is simple and effective for a patient-friendly rescue. The methodology and equipment is standardized in many parts of Europe including Germany and Scandinavia. The pulling moves the fire brigade's working space to the outside and allows parallel work of medical care and technical rescue.

Chain rescue can be used successfully in various accident scenarios such as frontal impact, side and rear impact.

#### Recommended kit

- 4 x 2,7m (9ft) chain sling MG1-CL
- 2 x 6m (20ft) synthetic sling\*
- 4 x RH synthetic sling hooks
- 4 x G209 or 854 bow screw pin shackles
- 2 x metal or plastic hardcase for easy storage\*

\*not manufactured by The Crosby Group





The kits are available in sizes from 6mm (7/32 inch) up to 16mm (5/8 inch) and working load limits up to 10 t (22 600 lb). Most commonly 8mm (5/16 inch) or 10mm (3/8 inch) are used, along with appropriately sized synthetic slings and synthetic sling hooks.

