

- Innovative designs to withstand the rigours of Aquaculture
- Fully approved to NS9415
- Full traceability
- Based on the original 'Chain with a Fish'
- Easy to install and end-user friendly



# Designed for the rigours of Aquaculture

Crosby Trawlex® has offered a range of chain and components specifically devised for the rigours of commercial fishing since 1971. From the outset, it has been created with the end user in mind. By designing the range with experienced trawler men and the use of extensive sea-going research, Crosby Trawlex® has proven to be the most versatile and cost-effective method of trawl rigging available.

Now we turn our attention to the aquaculture industry and merge the experience of making the world-famous Crosby® red pin shackle with a proven Trawlex® track record sub-sea, to launch a comprehensive range of aquaculture mooring products.

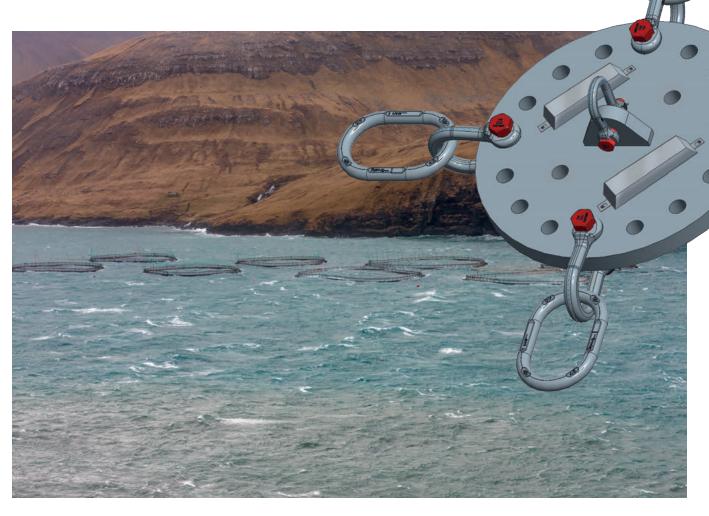
The complete Crosby Trawlex® range is enhanced with super strength capabilities due to the special steels and heat treatment used. The heat treatment also ensures that ductility is retained ensuring that the range is highly resistant to the effects of shock loading and wear.

## Benefit from our Expertise

Compare Crosby Trawlex® chain and components to other products on the market and you will soon see the benefits of using Crosby Trawlex®.

Operating costs of the net system are reduced due to high strength, wear resistance and shock resistance. Time is also saved by the unique fin on the TXMS Mooring Shackle, meaning one person can assemble the nut and bolt of a shackle without any difficulty.

The superior lightness of Crosby Trawlex® chains and components, makes it possible to reduce the size of chain used, making the handling of the components much easier, less bulky to transport and more cost-effective.



# Crosby Trawlex® Benefits

#### Innovation

World's first chain maker to attain BS EN ISO 9001.

## Diversity

Widest range of chain sizes, calibrated stability.

### Testing

100% non-destructive testing on all products.

### Performance

Materials optimised for low temperature conditions.

## Weight

Lighter and less bulky products.

#### Research

Crosby Trawlex® has a comprehensive research policy to constantly seek improvements to our products.

## Certification

All components within the Crosby Trawlex® Aquaculture range are certified to NS9415.

Full Product Identification Code (PIC) traceability on all products.







# TXMS Mooring Shackle



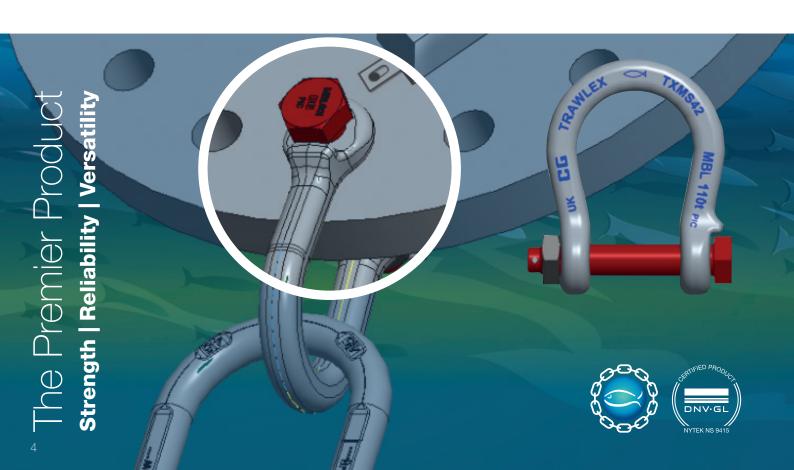
The new TXMS Mooring shackle takes existing Crosby® shackle technology and brings it into the aquaculture industry with unique features.

- A raised fin across all sizes prevents the nut from rotating during solo installation.
- Closed-die forging the body in our UK facility ensures we have total control over the design and material properties of the product.
- Both body and pin have Crosby® PIC Product Identification Codes.
- High strength steel gives the body and pin equal superior strength.
- Double locking achieved by nut and cotter pin.
- Body and pin are heat-treated and fully galvanized.
- User-friendly to divers when installing.
- Certified to NS9415.

## TXMS Mooring Shackle



TXMS M	TXMS Mooring Shackle												
Stock No.	Nominal Size	MBL (t)	Weight (kg)	Dimensions (mm)									
	(mm)			Α	В	С	D	Е	F	L	N		
2785100	19	30	0.98	44.5	22.73	95	20	60	50	96	20		
2785109	22	40	1.5	52.5	25	120	22	70	54	114	24		
2785118	28	60	3.11	61	29.18	145	28.5	90	68	147	31.75		
2785127	32	90	4.5	81	35.66	165	33	100	76	164	35.25		
2785136	42	110	8.98	111	42.11	195	43	150	92	232	43		
2785145	45	150	12.9	125	51.79	250	45	175	105	265	47		



# TLN Connector

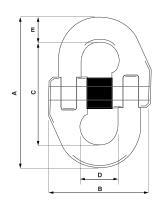


The TL was launched in 1971 and remains THE connector in the trawling industry. It easily found a home in the aquaculture industry. A two-piece design with pin and bush makes it easy to assemble but very difficult to break. Gold passivation gives the TL its familiar colour and assists with its corrosion protection.

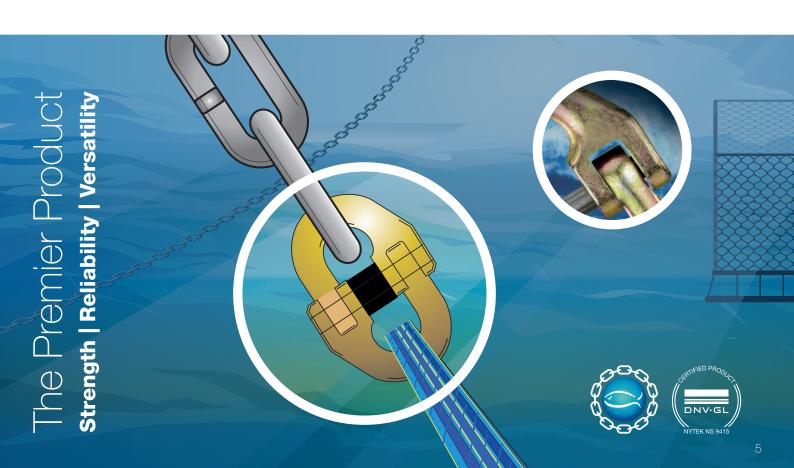
Each new TL is proof tested at our factory in the UK.

- The ultimate connector.
- Two-piece design, closed-die forged.
- Galvanized and gold passivation.
- Fully machined fulcrum points.
- Every TL is 100% proof tested prior to despatch.
- Fully traceable PIC Product Identification Codes on forged parts.
- Certified to NS9415.

## TLN Component Connector



LN Compo	nent Connec	tor								
Stock No.	Model	MBL (t)	Dimensions (mm)							
			Α	В	С	D	E	(kg)		
2780583	TL7N	7	67	49	48	14.3	9	0.11		
2780592	TL10N	16.9	89	66	64	19.2	13	0.36		
2780609	TL13N	25.7	118	85	85	26.5	17	0.66		
2780618	TL16N	36	144	96	106	32	19	1.08		
2780627	TL19N	49	168	115	122	38.5	23	1.77		
2780636	TL23N	73.8	206	140	150	49	28	2.8		
2780645	TL26N	92	230	163	166	57	32	4.4		
2780654	TL32N	144	278	210	200	63	39	8.4		



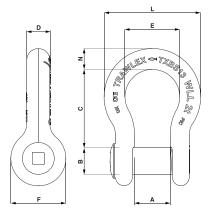
# TXBS Bow Shackle



Using the Crosby® Bow shackle body as a base, the TXBS takes this to new levels. Double locking protection as standard to fully comply with NS9415. High quality steel on the body and pin gives excellent metallurgical properties.

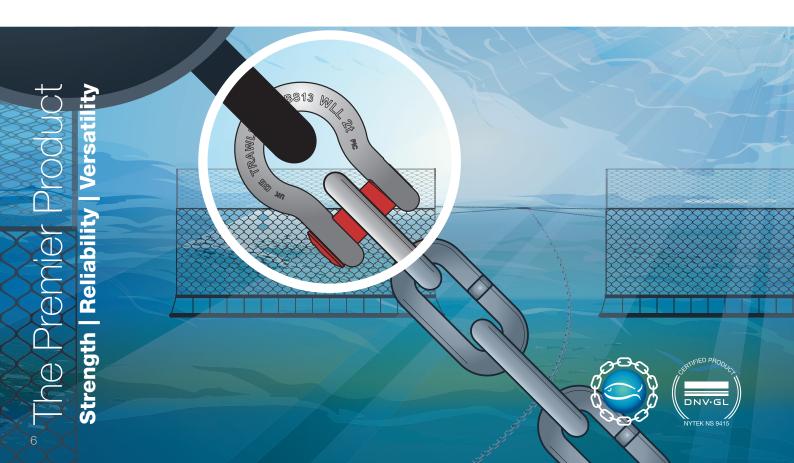
- Body and Pin is fully galvanized.
- Closed-die forged quenched and tempered, with alloy pin.
- High-visibility double-locking makes inspection sub-sea easy.
- Countersunk pin reduces the risk of snagging on nets.
- Both body and pin have Crosby® PIC Product Identification Codes.
- Also available in D version.
- Certified to NS9415.

## TXBS Countersunk Bow Shackle

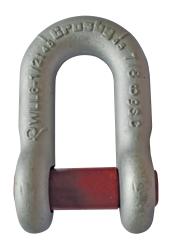


TXBS B	TXBS Bow Shackle												
Stock No.	Nominal Size	WLL (t)	MBL (t)	Wrench Size	Weight (kg)	Billiolololo							
(mm)			(in)	1	Α	В	С	D	E	F	L	N	
2785600	13	2	10	3/8	0.25	21.84	16	47.6	12.7	33.27	29.97	59	12.7
2785609	16	3.25	16.25	3/8	0.5	27.79	19	60.3	15.75	43	38.1	74	17.53
2785618	19	4.75	23.75	3/8	0.8	33.27	22.73	71.2	19.04	50.8	45.97	88.9	20.57
2785627	22	6.5	32.5	1/2	1.25	37.85	25	83.5	22.35	58	53.3	103	24.6
2785636	25	8.5	42.5	1/2	2.1	44.4	29.18	95.0	25.4	68	60.45	119	27

Based on the world-leading Crosby® Bow shackle, Trawlex TXBS is included with double-locking as standard.



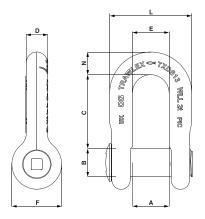
# Crosby Trawlex TXDS D Shackle



Using the Crosby® D shackle body as a base, the TXDS takes this to new levels. Like the TXBS, Double locking protection as standard to fully comply with NS9415. High quality steel on the body and pin gives excellent metallurgical properties.

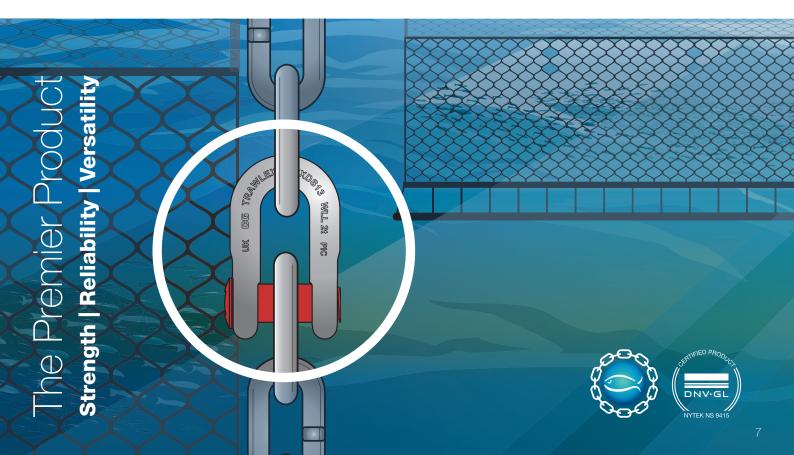
- Body and pin is fully galvanized.
- Closed-die forged quenched and tempered, with alloy pin.
- High-visibility double-locking makes inspection sub-sea easy.
- Countersunk pin reduces the risk of snagging on nets.
- Both body and pin have Crosby® PIC Product Identification Codes.
- Also available in Bow version.
- Certified to NS9415.

## TXDS Countersunk D Shackle



TXDS D	TXDS D Shackle													
Stock Nominal WLL MBL Wrench Weight No. Size (t) (t) Size (kg) (mm)										s				
(mm)	(mm)			(in)		Α	В	С	D	E	F	L	N	
2785500	13	2	10	3/8	0.23	20.57	16	41.3	12.7	20.57	29.97	45.97	12.7	
2785509	16	3.25	16.25	3/8	0.45	26.92	19	50.9	16	26.92	38.1	58.93	16	
2785518	19	4.75	23.75	3/8	0.79	31.75	22.73	60.1	19.05	31.75	45.97	69.85	20.57	
2785527	22	6.5	32.5	1/2	1.3	37	25	71.8	22.35	37	53.3	81	25	
2785536	25	8.5	42.5	1/2	1.8	43	22	80.6	25	43	60.45	93.8	25.4	

Trawlex TXDS is included with double-locking as standard.

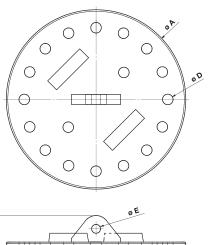


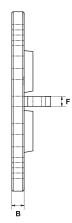
# TXCP Connection Plate



Manufactured at our ISO9001 certified factory in the Netherlands, the TXCP uses the latest robotic welding machines to give an outstanding product.

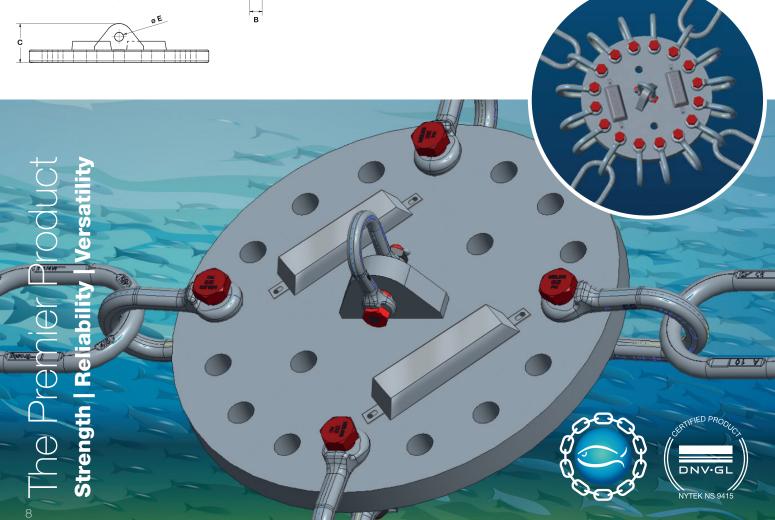
- Fitted with zinc anodes as standard to reduce corrosion.
- Mounting holes make installation and inspection easier.
- Available in 3 sizes as standard to give the installer as much flexibility as possible during design and installation.
- High quality steel gives excellent metallurgical properties.
- The TXCP is fully galvanized for corrosion resistance.
- Certified to NS9415.





## TXCP Connection Plate

TXCP Co	TXCP Connection Plate												
Stock No.	MBL (t)	Weight (kg)		Dimensions (mm)									
			Α	В	С	D	E	F					
2785700	50	52	450	40	148	36	36	40					
2785709	100	74	550	40	148	39	36	40					
2785718	150	165	730	50	158	43	36	40					

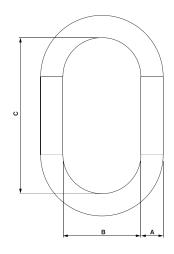


# TXA344 Galvanized Masterlink



## Crosby® is well-known for its range of masterlinks and the TXA344 compliments this range.

- Alloy Steel quenched and tempered.
- Engineered flat on side of masterlinks makes installation of thimbles easier.
- Proof Tested.
- Welded masterlink generous internal dimensions.
- Forged markings include Product Identification Code (PIC) for material traceability and size.
- Fully galvanized.
- Certified to NS9415.



## TXA344 Galvanized Masterlink

TXA344 Ga	TXA344 Galvanized Masterlink											
Stock No	Stock No Size		WLL (t)	MBL (t)	Weight (kg)	Dimensions (mm)						
	mm	in				Α	В	С				
2785800	22	7/8	8.5	42.5	1.59	22	90	170				
2785809	28	1-1/8	13	65	3.22	28	145	275				
2785818	32	1-1/4	17	85	5.3	32	140	270				
2785827	36	1-7/16	24	120	6.87	36	155	285				



# G2130 OC Bolt-type Shackle

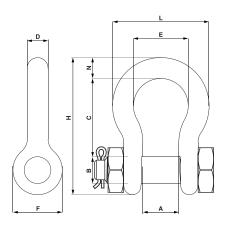


### G2130 OC

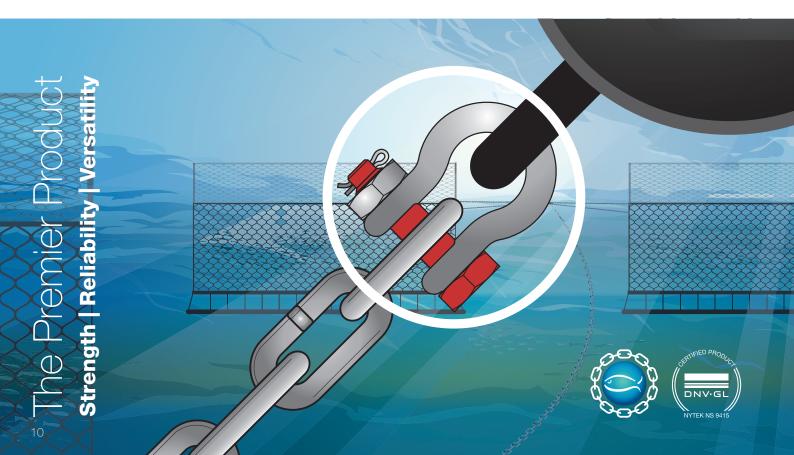
## Bolt-type anchor shackles with bolt & nut with cotter pin.

- Working Load Limit and grade '6' permanently shown on every shackle.
- Closed-die forged quenched and tempered, with alloy pins.
- Hot dip galvanized.
- Both body and bolt have Crosby® PIC Product Identification Codes.
- Certified to NS9415.

## G2130 OC Bolt-type Shackle



G2130 O	G2130 OC Bolt-type Shackle												
Stock No.	Nominal Size (in)	WLL (t)	MBL (t)	Weight (kg)	Dimensions (mm)								
					Α	В	С	D	E	F	Н	L	N
1262013	5/8	3-1/4	19.5	0.62	26.9	19.1	60.5	16.0	42.9	38.1	106	74.5	17.5
1262022	3/4	4-3/4	28.5	1.23	31.8	22.4	71.5	19.1	51.0	46.0	126	89.0	20.6
1262031	7/8	6-1/2	39	1.79	36.6	25.4	84.0	22.4	58.0	53.0	148	102	24.6
1262040	1	8-1/2	51	2.28	42.9	28.7	95.5	25.4	68.5	60.5	167	119	26.9
1262059	1-1/8	9-1/2	57	3.75	46.0	31.8	108	28.7	74.0	68.5	190	131	31.8
1262068	1-1/4	12	72	5.31	51.5	35.1	119	31.8	82.5	76.0	210	146	35.1
1262077	1-3/8	13-1/2	81	7.18	57.0	38.1	133	35.1	92.0	84.0	233	162	38.1
1262086	1-1/2	17	102	8.62	60.5	41.4	146	38.1	98.5	92.0	254	175	41.1
1262095	1-3/4	25	150	15.4	73.0	51.0	178	44.5	127	106	313	225	57.0



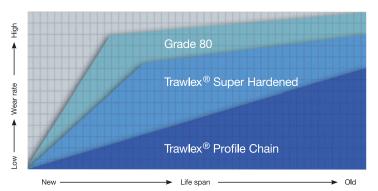
# Crosby Trawlex® Chain

The real challenges to mooring systems when new, are set by the industry's severe environment. These conditions may result in early failures caused by wear and corrosion. The new Trawlex Profile Chain™ has been designed to take up these challenges.

#### Wear

The revolutionary design and the use of wear resistant materials in Trawlex Profile Chain™ have greatly reduced the effects of wear, the main cause of reduction in a chain's tensile strength, compared with traditional chain (fig1).

Fig 1. Wear Comparison Chart



## Corrosion and Fatigue

As yet, corrosion cannot be eliminated at an acceptable cost, however the increased contact areas of Trawlex Profile Chain<sup>TM</sup>(fig2), together with the use of improved materials and heat treatment, have radically reduced the chances of stress and fatigue and therefore the effects of corrosion.

Fig 2. Link contact area cross section



Round Chain



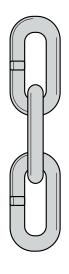
- Compare Crosby Trawlex® chain and components to other products on the market and you will soon see the benefits of using Crosby Trawlex®.
- Operating costs of the installation are reduced due to high strength, wear resistance and shock resistance.
- The original 'Chain with a Fish'.

# Crosby Trawlex® Long Link Chair



- Generous dimensions help to keep the weight of the chain down, whilst maintaining its strength.
- Special heat treatment to assist with corrosion protection and avoid stress failures.
- Profile Chain™ available in sizes 16mm & 19mm
- Typically Grade 90-Grade 95 Certified to NS9415

TRAW-LL Long	LITIK CITAIII							
Stock No.	Chain Dia.		nensions m)	MBL (t)	Compatible Component	Weight (kg)	Standard Length	
	(mm)	Pitch	Width		Trawlex®		(m)	
2781699	9	53	15	12.5	TL7N	1.36	200	
2781706	11	63	18	18.5	TL10N	2.03	150	
2781715	13	80	22	26.5	TXMS30	2.83	150	
2781720	13	80	22	26.5	TXMS30	2.83	600	
2784339	16	100	24.5	40	TXMS40	4.34	100	
2784348	16	100	24.5	40	TXMS40	4.34	600	
2781724	16	100	24.5	40	TXMS40	4.34	100	
2784320	16	100	24.5	40	TXMS40	4.34	600	
2784357	19	100	25	57	TXMS60	6.31	108	
2781733	19	100	25	57	TXMS60	6.31	108	
2781742	22	120	35.5	72	TXMS90	8.74	70	
2781751	28	150	46	105	TXMS110	14.41	50	



Profile Chain ™

TRAW-LL Long Link Chain

World famous Trawlex Chain is approved under NS9415 for aquaculture use. Sizes 16mm & 19mm in a Profiled finish to reduce chain extension through wear. High breaking strength allows smaller diameter chains to be used.







## **Key features:**

TXMS Raised fin for ease of installation

TLN Passivated for corrosion protection

TXBS Fully galvanized for corrosion protection

TXDS Double-protection fitted as standard

• TXCP Zinc anodes fitted as standard for corrosion protection

• TXA344 Individually proof tested. Engineered flat

G2130 OC Closed die forging, galvanized and painted bolt

Chain Double heat-treated to reduce stress corrosion

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