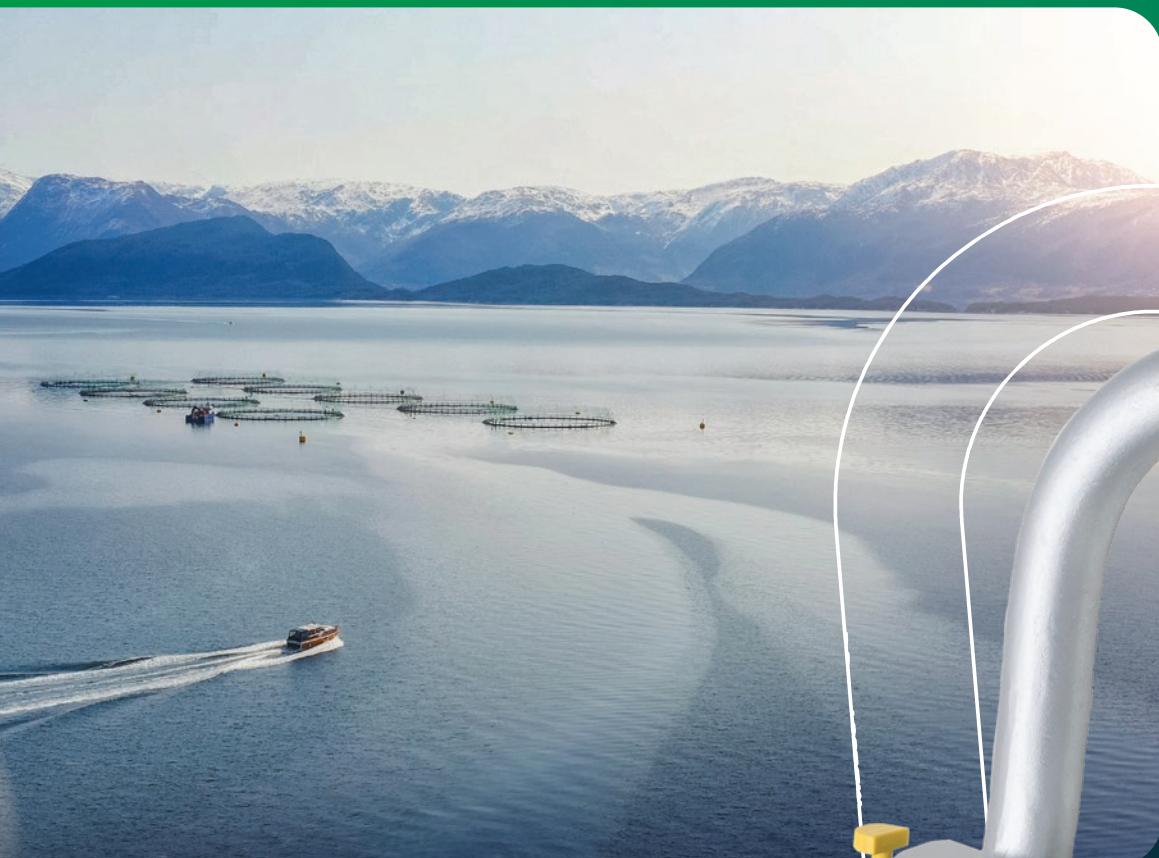


GREEN PIN® AQUACULTURE RANGE



WHAT IS BELOW SURFACE MUST BE ABOVE STANDARD



GREEN PIN® AQUACULTURE RANGE

Y our fish farming cages need to stay secure. What goes down must stay down. You must challenge the laws of nature. The same nature that you invest in and brings prosperity. That nature can be rough and ruthless under extreme marine conditions. Hence, your underwater cages need shackles and chains that are below surface, but above standard. Your cages need to be secured reliably for longer periods of time to safeguard your investments. That is why we humbly believe that our Green Pin® Aquaculture range should be the centrepiece of your rigging.

We create high-end lashing and lifting equipment since 1922. A wide range of 100% failsafe products and with a stock availability of 99%. Providing security and safety has always been our highest priority. Let Green Pin® to be the centrepiece of your mooring system.

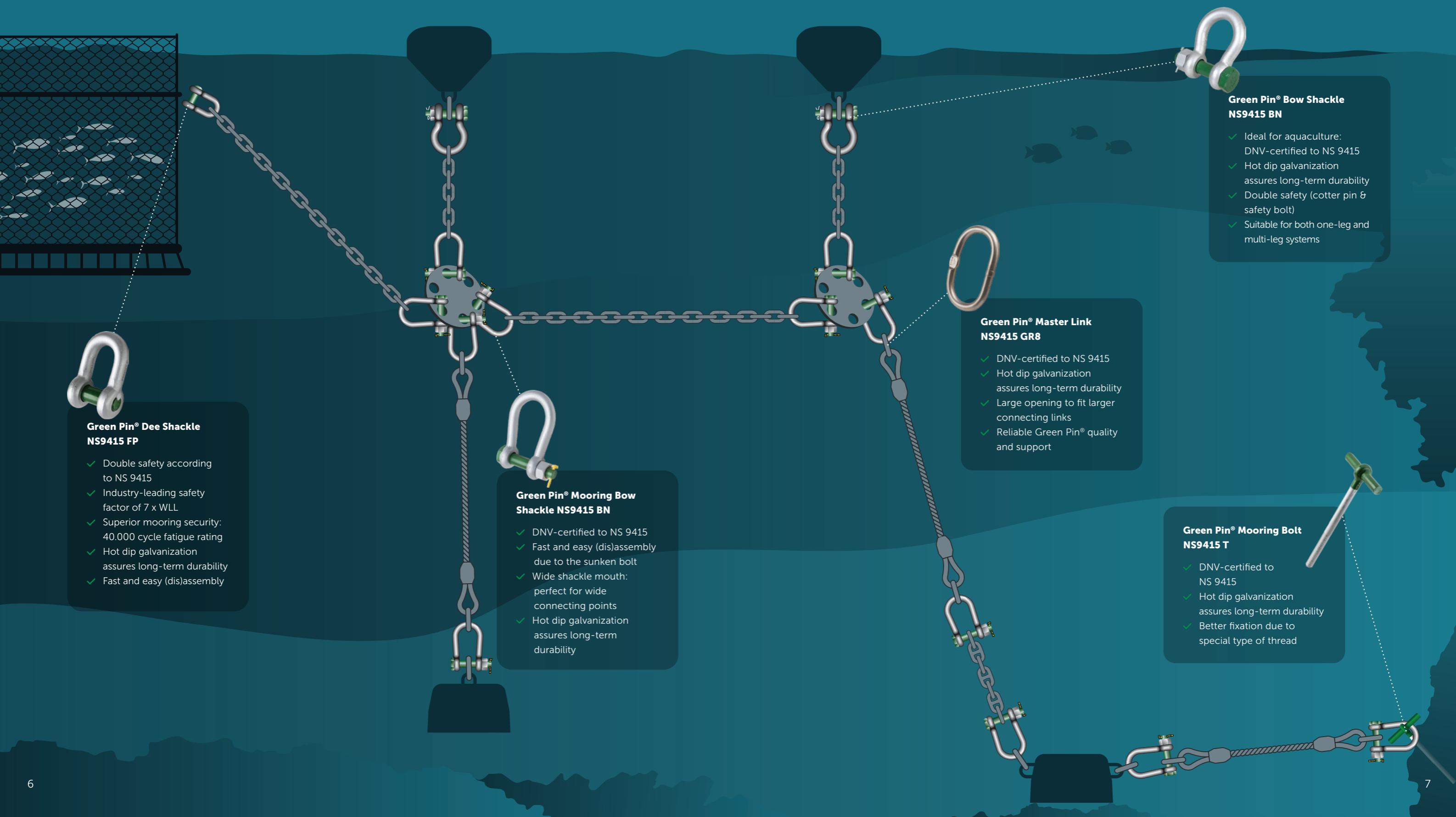
TOP PERFORMANCE UNDER EXTREME MARINE CONDITIONS



When taking great risks, great responsibility is required. Especially when considering people, products and profits at the same time. Taking that responsibility is key to Green Pin®. We want to reassure our customers by always providing products of the highest quality, as we have done for over a hundred years. We believe that our quality is more important than any stock price. That is exactly why we think that in the aquaculture business our fatigue-rating of twice the minimum requirement is well above standard.

That is why all our products are completely hot dipped galvanized. That is why all our products have smoother surfaces to prevent damage on counter components. And that is why we offer our industry-leading safety factor of 7 x WLL only for the spearhead products in our portfolio. Where, of course, NS 9415 is just the minimum standard for our entire range. That is the Green Pin® standard: what is below surface, must be above standard.

PRODUCT FEATURES



SHACKLES

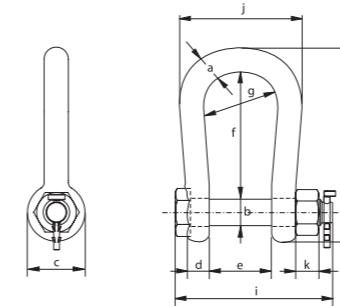
GREEN PIN® MOORING BOW SHACKLE NS9415 BN



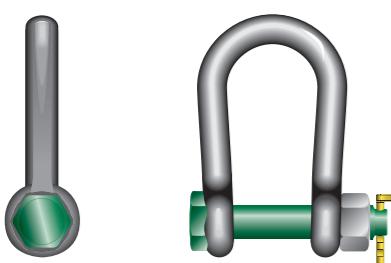
Grade 8 mooring bow shackle with safety bolt and sunken bolt head

The Green Pin® Mooring Bow Shackle NS 9415 BN is a bow shackle with a safety bolt and a sunken bolt head that has been designed for mooring applications. The shackle offers a double safety (safety bolt and synthetic cotter pin) which prevents accidental unscrewing of the pin. The sunken bolt prevents rotation of the bolt, making it much easier to assemble. It also minimizes possible damage to nets or mooring lines. The wider shackle mouth enables you to connect the shackle to a mooring or connecting plate which is wider than usual. The shackle offers best-in-class quality, guaranteeing absolute security for your mooring system. The hot dipped galvanization ensures long-term durability even under severe environmental conditions, as required by the NS 9415 standard and in compliance with NYTEK23-regulation (as certified by DNV). The Mooring Bow Shackle NS9415 BN is suitable for both one-leg and multi-leg systems and is available in a range of minimum breaking load from 30 up to 150 t.

Productcode	G-4863
Material	bow and pin alloy steel, grade 8, quenched and tempered
Finish	hot dipped galvanized
Temp. range	-20 °C up to +200 °C (-4 °F up to +392 °F)
Certification	2.1 2.2 3.1 MTC ^a CE IIA DNV NS 9415
Standard	NYTEK23 regulation and NS 9415
Note	the synthetic cotter pin is available for sizes WLL 4.75 t up to 12 t and must be ordered separately



minimum breaking load	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thickness nut	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
30	19	22	48	19	44	100	58	154	125	96	19	1.34
40	22	25	54	22	52	125	68	187	142	112	22	2.08
60	28	32	66	28	62	150	89	227	178	145	27	4.07
90	32	35	76	32	82	170	98	258	207	162	30	5.95
110	42	45	90	42	112	200	150	310	261	234	25	14.7
150	45	50	105	45	125	225	175	348	288	265	23	16.7



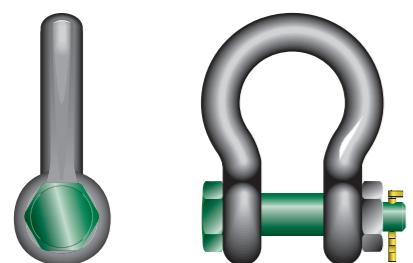
SHACKLES

GREEN PIN® BOW SHACKLE NS9415 BN

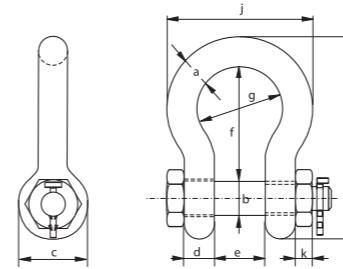


Standard bow shackle with safety bolt according to NS 9415

The Green Pin® Bow Shackle BN is a bow shackle with a safety bolt. The shackle offers a double safety (split pin and safety bolt) which prevents accidental unscrewing of the pin. The shackle's hot dipped galvanization ensures long-term durability as required by the NS 9415 standard, in compliance with NYTEK23 regulation. The Green Pin® Bow Shackle BN is suitable for both one-leg and multi-leg systems and is available in a range with a working load limit from 2 up to 25 t.



Productcode	G-4163BG
Material	bow and pin high tensile steel, grade 6, quenched and tempered
Safety factor	MBL equals 6 x WLL
Finish	hot dipped galvanized
Temp. range	-40 °C up to +200 °C (-40 °F up to +392 °F)
Certification	2.1 2.2 3.1 MTC ^a CE IIA DNV NS 9415
Standard	NYTEK23 regulation and DNV NS 9415, EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271, Type IVA, Class 3, Grade A. From 2 t and upward these shackles comply with ASME B30.26
Note	the synthetic cotter pin is available for sizes WLL 4.75 t up to 12 t and must be ordered separately



working load limit t	diameter bow a mm	diameter pin b mm	diameter eye c mm	width eye d mm	width inside e mm	length inside f mm	width bow g mm	length h mm	length bolt i mm	width j mm	thickness nut k mm	weight each kg
0.5	7	8	16	7	12	29	20	48	42	34	4	0.06
0.75	9	10	20	9	13.5	32	22	56	50	40	5	0.11
1	10	11	23	10	17	37	26	64	60	46	8	0.16
1.5	11	13	25	11	19	43	29	73	67	51	11	0.22
2	13.5	16	34	13	22	51	32	90	80	59	13	0.42
3.25	16	19	40	16	27	64	43	110	98	75	17	0.74
4.75	19	22	46	19	31	76	51	129	115	89	19	1.18
6.5	22	25	52	22	36	83	58	144	130	102	22	1.77
8.5	25	28	59	25	43	95	68	164	150	118	25	2.58
9.5	28	32	67	28	47	108	75	186	166	131	27	3.66
12	32	35	73	32	51	115	83	201	184	147	30	4.91
13.5	35	38	79	35	57	133	92	227	197	162	33	6.54
17	38	42	88	38	60	146	99	249	202	175	19	8.19
25	45	50	104	45	74	178	126	300	243	216	23	14
35	50	57	112	50	83	197	138	332	269	238	26	18.8
42.5	57	65	132	57	95	222	160	378	301	274	29	28.3
55	65	70	145	65	105	260	180	433	329	310	32	39.6
85	75	83	167	75	127	330	190	530	381	340	39	62

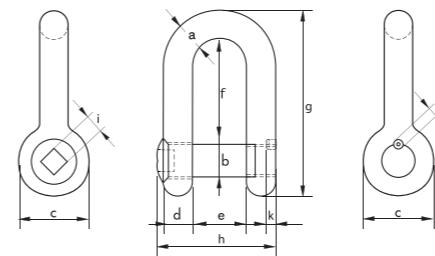
GREEN PIN® DEE SHACKLE NS9415 FP



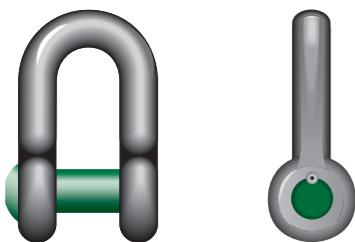
Dee shackle with square sunken hole screw pin (flush) and double safety plug

The Green Pin® Dee Shackle NS9415 FP is a dee shackle with a square sunken hole screw pin (flush pin) which provides best-in-class quality, guaranteeing absolute security for your mooring system. The Green Pin® Dee Shackle NS9415 FP is an exemplary shackle in this product line. Its square, sunken hole screw pin combined with a safety plug makes it a double safety product that is easy to assemble and disassemble with the Green Pin® Sunken Hole Key. The shackle's hot dipped galvanization ensures long-term durability as required by the NS 9415 standard. Testifying to its superior record when it comes to mooring safety, the 40.000 cycle fatigue rating is twice that required by NS 9415 and unparalleled in the market. What is more, the safety factor leads the industry with an MBL of seven times the WLL. The Dee Shackle NS9415 FP is certified by DNV on compliancy with NYTEK23 regulation and NS 9415. It is suitable for one-leg mooring systems only, and is available in a range of working load limits from 2 up to 8.5 t.

Productcode	G-4139
Material	bow and pin high tensile steel, grade 6, quenched and tempered
Safety factor	MBL equals 7 x WLL
Finish	hot dipped galvanized
Temp. range	-40 °C up to +200 °C (-40 °F up to +392 °F)
Certification	2.1 2.2 3.1 MTC ^a CE IIA DNV NS 9415
Standard	NYTEK23 regulation and NS 9415, ISO 2415, EN 13889, ASME B30.26
Note	key for unscrewing the pin (E-4170) and additional plugs (GPPLUG) must be ordered separately



working load limit t	diameter bow a mm	diameter pin b mm	diameter eye c mm	width eye d mm	width inside e mm	length inside f mm	length g mm	length bolt h mm	size square hole i mm	diameter plug hole j mm	depth plug hole k mm	weight each kg
2	13.5	16	34	13	22	43	81	51	11	8	8	0.29
3.25	16	19	40	16	27	51	97	63	11	8	8	0.60
4.75	19	22	46	19	31	59	112	74	11	8	8	0.98
6.5	22	25	52	22	36	73	134	85	13	8	8	1.26
8.5	25	28	59	25	43	85	154	99	13	8	8	2.14



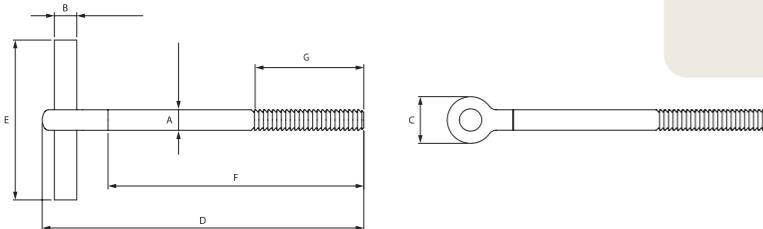
MOORING BOLTS

GREEN PIN® MOORING BOLT NS9415 T



Mooring bolt with T-shaped end-fitting

The Green Pin® Mooring Bolt NS9415 T is a grade 8 mooring bolt with a T-shaped end fitting that provides best-in-class quality, guaranteeing absolute security for your mooring system. The mooring bolt's hot dipped galvanization ensures long-term durability as required by the NS 9415 standard. The mounting depth is indicated by the green colour, which makes the installation of the product much easier and the special type of thread will result in a better fixation of the bolt. What's more, the mooring bolt NS9415 is certified by DNV in compliance with NYTEK23 regulation and NS 9415. It is available in a range of minimum breaking load from 40 up to 170 t.



minimum breaking load t	diameter bolt a mm	diameter crossing bar b mm	diameter eye c mm	length d mm	width e mm	mounting depth f mm	length mounting thread g mm	weight each kg
40	32	35	73	503	250	400	170	5.16
60	38	42	88	628	300	500	210	9.06
80	45	50	104	744	400	600	300	15.6
100	50	57	112	774	400	600	300	20
130	57	57	119	779	400	600	300	23.7
170	65	57	140	900	400	700	350	32.8

Scan for additional product details

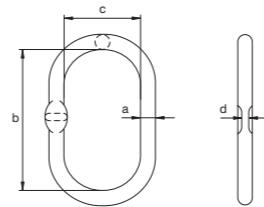
LINKS

GREEN PIN® MASTER LINK NS9415 GR8



Grade 8 master link according to NS 9415

The Green Pin® Master Link NS 9415 GR8, is a grade 8 master link. The Master Link is certified according to DNV NS 9415 and has a large opening to accommodate larger connecting links. The hot dipped galvanization ensures long-term durability even under severe environmental conditions, as required by the NS 9415 standard. This master link is designed for a one- or two-leg sling. The master links are available in a range with a minimum breaking load from 40 to 110 t.



minimum breaking load t	diameter a mm	length inside b mm	width inside c mm	thickness d mm	weight each kg
32.8	22	170	90	12	1.60
51.5	28	209	113.5	18	3.20
68.3	32	270	140	18	5.30
112.4	38	270	140	28	7.80

Scan for additional product details



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Get in touch

Whatever your question, the Green Pin® commercial and technical support teams are standing ready to swiftly provide you with a solution. Reach out to our qualified distributors if you want to know more about our products.

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SHACKLES

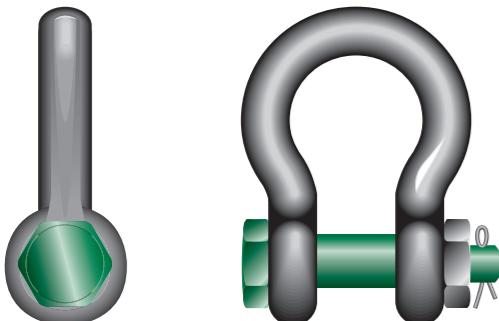
GREEN PIN® BOW SHACKLE NS9415 BN



Standard bow shackle with safety bolt according to NS 9415

The Green Pin® Bow Shackle BN is a bow shackle with a safety bolt. The shackle offers a double safety (split pin and safety bolt) which prevents accidental unscrewing of the pin. The shackle's hot dipped galvanization ensures long-term durability as required

by the NS 9415 standard, in compliance with NYTEK regulation. The Green Pin® Bow Shackle BN is suitable for both one-leg and multi-leg systems and is available in a range with a working load limit from 2 up to 25 t.



Productcode	G-4163
Material	bow and pin high tensile steel, Grade 6, quenched and tempered
Safety factor	MBL equals 6 x WLL
Finish	hot dipped galvanized
Temp. range	-40 °C up to +200 °C (-40 °F up to +392 °F)
Certification	2.1 2.2 3.1 MTC ^a DNV 2.7-1 ^a DNV 2.7-1 ^b DNV-ST-0378 CE ABS PDA ABS MA
Standard	Nytek regulation and NS 9415, EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271, Type IVA, Class 3, Grade A. From 2 t and upward these shackles comply with ASME B30.26

SHACKLES

GREEN PIN® DEE SHACKLE NS9415 FP



Dee shackle with square sunken hole screw pin (flush) and double safety plug

The Green Pin® Dee Shackle NS9415 FP is a dee shackle with a square sunken hole screw pin (flush pin) which provides best-in-class quality, guaranteeing absolute security for your mooring system. The Green Pin® Dee Shackle NS9415 FP is an exemplary shackle in this product line. Its square, sunken hole screw pin combined with a safety plug makes it a double safety product that is easy to assemble and disassemble with the Green Pin® Sunken Hole Key. The shackle's hot dipped galvanization



ensures long-term durability as required by the NS 9415 standard. Testifying to its superior record when it comes to mooring safety, the 40.000 cycle fatigue rating is twice that required by NS 9415 and unparalleled in the market. What is more, the safety factor leads the industry with an MBL of seven times the WLL. The Dee Shackle NS9415 FP is certified by DNV on compliance with NYTEK regulation and NS 9415. It is suitable for one-leg mooring systems only, and is available in a range of working load limits from 2 up to 8.5 t.

Productcode	G-4139
Material	bow and pin high tensile steel, Grade 6, quenched and tempered
Safety factor	MBL equals 7 x WLL
Finish	hot dipped galvanized
Temp. range	-40 °C up to +200 °C (-40 °F up to +392 °F)
Certification	2.1 2.2 3.1 MTC ^a CE DNV NS 9415
Standard	Nytek regulation and NS 9415
Note	key for unscrewing the pin must be ordered separately (E-4170)

MOORING BOLTS

GREEN PIN® MOORING BOLT NS9415 T



Mooring bolt with T-shaped end-fitting

The Green Pin® Mooring Bolt NS9415 T is a grade 8 mooring bolt with a T-shaped end fitting that provides best-in-class quality, guaranteeing absolute security for your mooring system. The mooring bolt's hot dipped galvanization ensures long-term durability as required by the NS 9415 standard. The mounting depth is indicated

by the green colour, which makes the installation of the product much easier and the special type of thread will result in a better fixation of the bolt. What's more, the mooring bolt NS9415 is certified by DNV in compliance with NYTEK regulation and NS 9415. It is available in a range of minimum breaking load from 40 up to 170 t.

LINKS

GREEN PIN® MASTER LINK NS9415 GR8



Grade 8 master link according to NS 9415

The Green Pin® Master Link NS 9415 GR8, is a grade 8 master link. The Master Link is certified according to DNV NS 9415 and has a large opening to accommodate larger connecting links. The hot dipped galvanization ensures long-term durability

even under severe environmental conditions, as required by the NS 9415 standard. This master link is designed for a one- or two-leg sling. The master links are available in a range with a minimum breaking load from 40 to 110 t.



Productcode	G-8310
Material	high tensile steel, grade 8, quenched and tempered
Finish	hot dipped galvanized
Temp. range	-20 °C up to +200 °C (-4 °F up to +392 °F)
Certification	2.1 2.2 3.1 MTC ^a CE DNV NS 9415
Standard	NYTEK regulation and NS 9415



Productcode	G-6870
Material	alloy steel, Grade 8
Safety factor	MBL equals 5 x WLL
Finish	hot dipped galvanized
Temp. range	-40 °C up to +200 °C (-40 °F up to +392 °F)
Certification	2.1 2.2 3.1 MPI ^b DNV NS 9415
Standard	Nytek regulation and NS 9415, DNV 2.7-1, EN 12079-2 and EN 1677-4

MOORING BOLTS

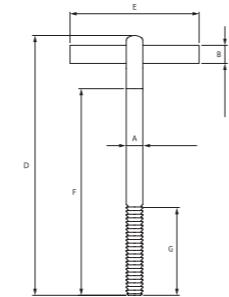
GREEN PIN® MOORING BOLT NS9415 T



Mooring bolt with T-shaped end-fitting

The Green Pin® Mooring Bolt NS9415 T is a grade 8 mooring bolt with a T-shaped end fitting that provides best-in-class quality, guaranteeing absolute security for your mooring system. The mooring bolt's hot dipped galvanization ensures long-term durability as required by the NS 9415 standard. The mounting depth is indicated by the green colour, which makes the installation of the product much easier and the special type of thread will result in a better fixation of the bolt. What's more, the mooring bolt NS9415 is certified by DNV in compliance with NYTEK23 regulation and NS 9415. It is available in a range of minimum breaking load from 40 up to 170 t.

Productcode	G-8310
Material	high tensile steel, grade 8, quenched and tempered
Finish	hot dipped galvanized
Temp. range	-20 °C up to +200 °C (-4 °F up to +392 °F)
Certification	2.1 2.2 3.1 MTC ^a CE IIA DNV NS 9415
Standard	NYTEK23 regulation and NS 9415



minimum breaking load t	diameter bolt a mm	diameter crossing bar b mm	diameter eye c mm	length d mm	width e mm	mounting depth f mm	length mounting thread g mm	weight each kg
40	32	35	73	503	250	400	170	5.16
60	38	42	88	628	300	500	210	9.06
80	45	50	104	744	400	600	300	15.6
100	50	57	112	774	400	600	300	20
130	57	57	119	779	400	600	300	23.7
170	65	57	140	900	400	700	350	32.8



LINKS

GREEN PIN® MASTER LINK NS9415 GR8



LINKS

Grade 8 master link according to NS 9415

The Green Pin® Master Link NS 9415 GR8, is a grade 8 master link. The Master Link is certified according to DNV NS 9415 and has a large opening to accommodate larger connecting links. The hot dipped galvanization ensures long-term durability even under severe environmental conditions, as required by the NS 9415 standard. This master link is designed for a one- or two-leg sling. The master links are available in a range with a minimum breaking load from 40 to 110 t.

Productcode	G-6870
Material	alloy steel, grade 8
Finish	hot dipped galvanized
Temp. range	-40 °C up to +200 °C (-40 °F up to +392 °F)
Certification	2.1 2.2 3.1 MTC ^b MPI ^a
Standard	NYTEK23 regulation and NS 9415, EN 1677-4

minimum breaking load t	diameter a mm	length inside b mm	width inside c mm	weight each kg
32.8	22	170	90	1.60
51.5	28	209	113.5	3.20
68.3	32	270	140	5.30
112.4	38	270	140	7.80

