



# GREEN PIN® AQUACULTURE RANGE



# WHAT IS BELOV SURFACE MUSTBE 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<sup>®</sup> Aquaculture range should be the centerpiece 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<sup>®</sup> to be the centerpiece of your mooring system.

# **TOP PERFORMANCE** UNDER EXTREME MARINE CONDITIONS

W hen 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<sup>®</sup>. 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<sup>®</sup> standard: what is below surface, must be above standard.



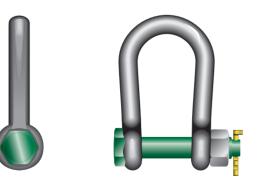


### SHACKLES

### GREEN PIN® MOORING BOW SHACKLE NS9415 BN

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

The Green Pin<sup>®</sup> 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 NYTEK-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 <sup>a</sup> CE DNV NS 9415
Standard	Nytek regulation and NS 9415

Note: supplied with cotter pin or several safety pins

# PRODUCT FEATURES



#### Green Pin<sup>®</sup> Dee Shackle NS9415 FP

- Double safety according to NS 9415
- Industry-leading safety factor of 7 x WLL
- Superior mooring security:
   40.000 cycle fatigue rating
- Hot dip galvanization assures long-term durability
- Fast and easy (dis)assembly

### Green Pin<sup>®</sup> Mooring Bow Shackle NS9415 BN

- ✓ DNV-certified to NS 9415
- Fast and easy (dis)assembly due to the sunken bolt
- Wide shackle mouth:
   perfect for wide
- connecting points
   Hot dip galvanization
- assures long-term durability

#### Green Pin<sup>®</sup> Bow Shackle NS9415 BN

- Ideal for aquaculture:
   DNV-certified to NS 9415
- Hot dip galvanization assures long-term durability
- Double safety (cotter pin &
   safety bolt)
- Suitable for both one-leg and multi-leg systems
- Part of Green Pin<sup>®</sup>
   aquaculture system

#### Green Pin<sup>®</sup> Master Link NS9415 GR8

- ✓ DNV-certified to NS 9415
- ✓ Hot dip galvanization
- assures long-term durability

  Large opening to fit larger
- connecting links
- Reliable Green Pin<sup>®</sup> quality and support

### Green Pin<sup>®</sup> <u>Mooring Bolt</u> NS9415 T

- DNV-certified to NS 9415
- Hot dip galvanization assures long-term durability

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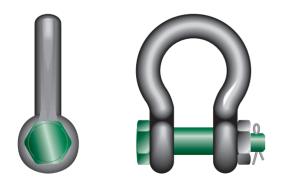
- Better fixation due to special type of thread
   Part of Green Pin<sup>®</sup>
- aquaculture system

### SHACKLES

### GREEN PIN® BOW SHACKLE NS9415 BN

## Standard bow shackle with safety bolt according to NS 9415

The Green Pin<sup>®</sup> 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<sup>®</sup> 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 <sup>a</sup> DNV 2.7-1 <sup>a</sup> DNV 2.7-1 <sup>b</sup> 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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 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 <sup>a</sup> 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<sup>®</sup> 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.

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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 <sup>a</sup> CE DNV NS 9415
Standard	NYTEK regulation and NS 9415

LINKS

### GREEN PIN® MASTER LINK NS9415 GR8



The Green Pin<sup>®</sup> 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
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 <sup>b</sup> DNV NS 9415
Standard	Nytek regulation and NS 9415, DNV 2.7-1, EN 12079-2 and EN 1677-4

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### Get in touch

Whatever your question, the Green Pin<sup>®</sup> 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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### **GREENPIN.COM**