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Dear customer,

For over 85 years the production of high tensile shackles has been our core business and competence. Dirk van Beest founded the Van Beest company in 1922, initially as a supplier of iron works to the dredging industry, which was strongly developed in the Sliedrecht area. From the very beginning, the company has been forging shackles. Its ironwork expertise gave the Van Beest shackle an edge over the competition and this was the start of a network of professional users that now stretches across the globe. The designs and quality standards of our shackles are the result of requirements put forward over the years by our customers in markets throughout the world. Our shackles are marked **Green Pin®**, and we are the sole proprietors of the trade name **Green Pin®**.

Production

At Van Beest we were faced with a labour-intensive production unit. Over the years Van Beest invested, with it's own engineers, in development of a series production line of high quality output. The highly automated machines in the factory are custom built to Van Beest's requirements and thus to those of our customers.

The same technicians demand the quality of the products during production and therefore guarantee quality to our customers. Each individual **Green Pin®** shackle is marked with the steel grade and a traceability code. But quality is not only a matter of the product itself, it stretches across the entire organization. Since 1993 our company has been ISO certified by Lloyd's; currently we are ISO 9001-2000 certified.

Accessories

Our **Green Pin®** shackles are used by professionals in many different environments such as the offshore industry, naval construction, the fishing industry, mining, and general industry, to mention just a few. The **Green Pin®** shackle is usually the final connection, and to serve our customers best, we have added a wide range of steel wire rope and chain accessories which complement our full range of high quality shackles. These accessories are engineered by Van Beest and carefully sourced from certified suppliers to ensure they represent the same high quality performance as our own products.

Distribution

Both our **Green Pin®** shackles and accessories are inspected and stored at our main warehouse in Sliedrecht, 30 km from Rotterdam, where we offer our wide range of shackles and accessories from stock. Rotterdam is the main seaport to Europe inbound and has sailing connections to all the major business centres across the world outbound.

Storage efficiency is optimized by the latest computer software, enabling us to make maximum use of our storage facilities. A customer order can be shipped from our warehouse within 4 hours from placing the order. Additionally, wholesalers throughout the world maintain stocks of our **Green Pin®** shackles and accessories in order to serve their own target markets best. In over 80 countries worldwide **Green Pin®** shackles and accessories are available from storage at our various distributors. We will be pleased to advise you of the **Green Pin®** supplier nearest to you to obtain supplies.

We trust this catalogue will be a helpful business tool for you and that it will assist you in serving your customers' needs. In addition, our skilled salespeople and technicians are always at your service. Please do not hesitate to contact us for any question related to shackles or other wire rope and chain accessories in general.

We are convinced that with the full range of our **Green Pin®** products and services you have found an excellent source that enables you to meet your needs in the global marketplace.

Kind regards,

C. Boer
 Managing Director

R.M. Meer
 General Sales Manager



P.S.: For general business terms and conditions see page 166



VAN BEEST BV, manufacturer and supplier of wire rope and chain fittings. Reg. trade mark 'Green Pin'
 Rabobank: accountnumber 35 93 43 155. IBAN code: NL86RABO0359343155, SWIFT/BIC code: RABONL2U
 Postbank 189638, Vat number NL 0091.33.835.B01, Chamber of Commerce Dordrecht: number 23009317
 All our offers and contracts are subject to our general conditions of business as registered with the District Court of Dordrecht on May 13, 1994 under number 17.088. Copies of these conditions are printed in our catalogue or can be obtained on request.



VAN BEEST BV, manufacturer and supplier of wire rope and chain fittings. Registered trademark **Green Pin®**



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your reliable partner

We reserve the right to make amendments on specifications mentioned in this catalogue without prior notification. Specifications show general compliance with the various standards and should not be taken to meet all terms of the contract or purchase order.

Chamber of Commerce Dordrecht, Registration Number 23009317
VAT Number NL 0091.33.835.B01

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General

In case you do not use the products yourself but are reselling these as a part of a product manufactured by yourself, please take our general cautions and warnings into account and make these known to your customers as well. In any case, we do not accept any responsibility or liability, nor can we be held responsible for any misuse or damage with, by or at your customers due to negligent use.

Definitions

Material

For the production of shackles and other lifting devices, different raw materials are used, depending on the use of the finished product. For shackles for example, depending on the specific use, the following raw materials can be applied:

- mild steel, untreated, comparable to grade 3
- high tensile steel, untreated, or normalized, which is comparable to grade 4
- high tensile steel, quenched and tempered, which is comparable to grade 6
- alloy steel, quenched and tempered, which is comparable to grade 8

Load

Following terms are used to define a load:

- Working Load Limit or WLL: the maximum load the product is designed to support, in general use and in a straight pull.
- Proof Load or PL: this is the load applied on proof testing the product. At this load the product may not show visual deformation. For further specific information as to the proof load applied, we refer to the separate paragraph on testing further on.
- Minimum Breaking Load or MBL; the minimum load at which the product may fail or no longer support the load. Where applicable the details on the MBL are given specifically for each product range, at the beginning of each chapter.
- Shock Load: a load resulting from a very rapid application of the load on the product. Shock loads are to be avoided in practice since these increases the stress on the product significantly and may affect its product life.

The unit that is used in this catalogue to indicate WLL, PL and MBL is metric tons.

Safety factor

This factor gives the ratio between the Minimum Breaking Load and the Working Load Limit.

For the standard range of Green Pin® shackles for example, the safety factor is 6:1, meaning that the shackle may only break once it is overloaded by a factor of at least 6 (6 times its designed Working Load Limit).

Product dimensions

All product dimensions in this catalogue are nominal dimensions. Product design, materials and/or specifications can be subject to alterations without prior notification.

Finish

Products can have following finish:

- Self coloured: the product is delivered in the condition it has been forged or machined and has undergone no specific finish treatment.
- Electro-galvanized: the product is electro-galvanized according to the customary standards, after the actual production of the product. The thickness of the coating is at least 5 μm .
- Hot dipped galvanized: the product is hot dipped galvanized according to the customary standards, after the actual production of the product. The thickness of the coating is at least 70 μm .
- Painted: the product is painted in a specific colour after the production.

Standard

These refer to the specific standards indicated for the product.

Temperature range

This indicates the temperature range at which the product can be used. Outside the temperature range the WLL of a product may be affected.

Certificates

Depending on the type of product and certificate availability for a certain product, following certificates are used in this catalogue:

- works certificate in accordance with EN 10204 - 2.1 or 2.2;
- certificate of basic raw material in accordance with EN 10204 - 3.1.1;
- manufacturer test certificate;
- EC Declaration of Conformity in accordance with annex IIA of the machine directive 98/37/EC and the latest amendments;
- inspection certificate in accordance with EN 10204 - 3.2;
- proof load test certificate;
- certificate with the actual breaking load experienced on tested samples.

Please refer to the relevant product chapter for further details on certificates.

On request we can test under supervision of a classification bureau like LROS, DNV, BV, etc..

Abbreviations

The following abbreviations are used in this catalogue:

C	Carbon steel
A	Alloy steel
R	Stainless steel
S	Self coloured
P	Painted
E	Electro-galvanized
G	Hot dipped galvanized



Testing

Generally the following proof loads are applied to the load rated products and certificates can be supplied upon request. For further conditions on certificates please consult the general price list.
For Green Pin shackles, the actual proof load depends on the shackle type and dimension and is applied as follows:

working load limit tons	Green Pin® standard shackles polar shackles heavy duty shackles proofload tons	Green Pin® super shackles proofload tons	Green Pin® sling shackles proofload tons
	0.33	0.66	
0.5	1		
0.75	1.5		
1	2		
1.5	3		
2	4		
3.25	6.5		
3.3		6.6	
4.75	9.5		
5		10	
6.5	13		
7		14	
8.5	17		
9.5	19	19	
12	24		
12.5		25	
13.5	27		
15		30	
17	34		
18		36	
21		42	
25	50		
30		60	
35	65		
40		80	60
42.5	74		
55	90	110	82.5
75			112.5
85	127.5	170	
120	180	240	
125			187.5
150	225	225	225
175		262.5	
200	300		300
250	375		375
300	450		450
400	600		532
500	750		665
600	900		798
700	1050		931
800	1200		1064
900	1350		1197
1000	1500		1330
1250	1875		1663
1500	2250		1995

General cautions and warnings

All Working Load Limits (WLL) indicated in this catalogue or in other Van Beest literature or publications are only applicable to recently supplied, new and unused products used under normal conditions.

Should extreme circumstances or shock loading be applicable, this must be taken into account when specifying the products to be used.

The Working Load Limit should be applied in a straight pull and overloads should not be applied. This also applies to side loads, which also should be avoided, as the products are not designed for this purpose and the application of a side load may significantly decrease the product life.

The Working Load Limit for the product corresponds to static use. In case of dynamic use (breaking, accelerations, shocks), the effective stress on the product increases significantly which can lead to product failure.

It is required that the products are regularly inspected and that the inspection should take place in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. with a consequence of deformation and alteration of the material structure.

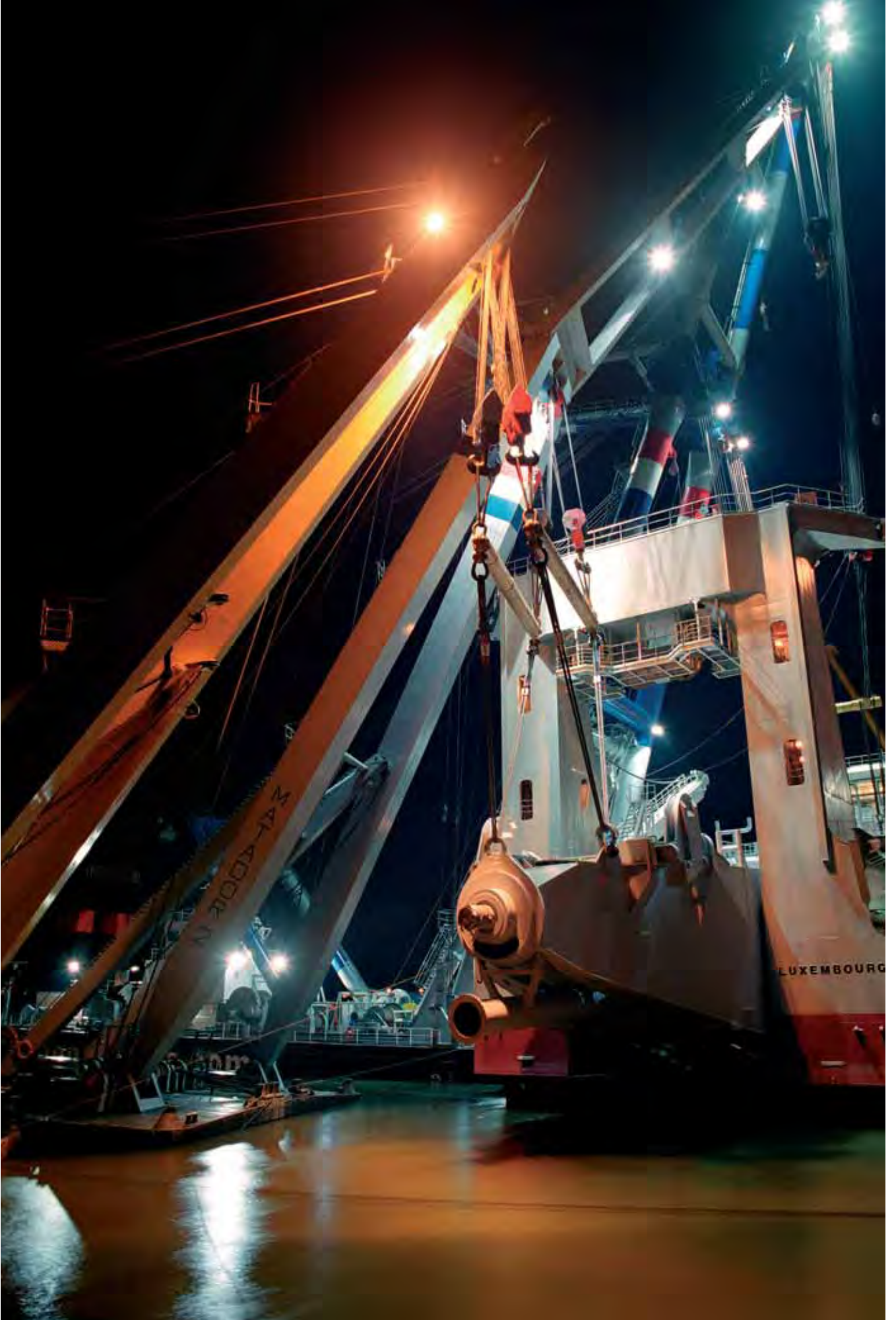
Inspection should take place at least every six months and even more frequently when the products are used in severe operating conditions.

In accordance with our on-going policy to improve our products, some dimensions or product markings may differ from those stated. The characteristics mentioned in this catalogue or in other Van Beest literature or publications are given merely as an indication. Van Beest reserves the right to make all suitable modifications to any product, even after acceptance of the customer order. In any case, the essential characteristics and performances of the products shall not be negatively affected by such modifications. Any dimension considered to be critical should be verified with our engineering department.

Conversion factors

To convert from	to	multiply by
Length		
mm	inch	0.0393701
inch	mm	25.4
Mass		
US tons	metric tons	0.9071847
metric tons	US tons	1.1023113
metric tons	pounds	2204.6226218
pounds	metric tons	0.0004536
metric tons	kilogram	1000
kilogram	metric tons	0.001
metric tons	kilo Newton	9.8066500
kilo Newton	metric tons	0.1019716
pounds	kilogram	0.4535924
kilogram	pounds	2.2046226
Torque		
Newton meter	foot pound-force	0.7375621
foot pound-force	Newton meter	1.3558180







1 Shackles	10	1
2 Thimbles	50	2
3 Wire Rope Clips	60	3
4 Sleeves	66	4
5 Sockets	70	5
6 Turnbuckles	78	6
7 Links	90	7
8 Swivels	94	8
9 Hooks	100	9
10 Eye Bolts/Eye Nuts	106	10
11 Loadbinders	110	11
12 Chain	114	12
13 Plate Lifting Clamps	116	13
14 Blocks	122	14
15 General Hardware	132	15
16 Stainless Steel Products	140	16