

## Applications

Shackles are used in lifting and static systems as removable links to connect wire rope, chain and other

Screw pin shackles are mainly used for non-permanent applications.

Bolt-type shackles are preferable used for long term or permanent applications and in circumstances where the pin of the shackles may rotate during loading.

Chain shackles are used mainly on one-leg systems.

Anchor shackles on multi-leg systems.

## Material

Mild steel, untreated which is comparable ISO Grade 3.

High tensile steel untreated or normalized which is comparable ISO Grade 4.

High tensile steel, quenched and tempered which is comparable ISO Grade 6.

Alloy steel quenched and tempered which is comparable ISO Grade 8.

All Shackles are upset-forged, on special requirement drop-forged shackles can be supplied.

Marking shackles for lifting applications:

- \* Work Load Limit
- \* the manufacturer's symbol
- \* trace ability code
- \* grade number
- \* CE

Example:

**Green Pin® Standard shackles**

WLL 25 T	– Work Load Limit 25 tons
Bs	– the manufacturer's symbol, Van Beest
H	– traceability code
6	– grade number
CE	– Conformity European

Shackles meet all relevant requirements of The Machinery Directive 89/392/EEC and the latest

## Documentation

On request shackles can be supplied with:

- \* a works certificate;
- \* a certificate of basic raw material;
- \* an inspection certificate DIN 50049-3.1.B or 3.1.C;
- \* a proof load test certificate;
- \* a certificate with the actual breaking load found on the test samples;
- \* a test report of Magnetic Particle Examination;
- \* a test report of Ultrasonic Examination.

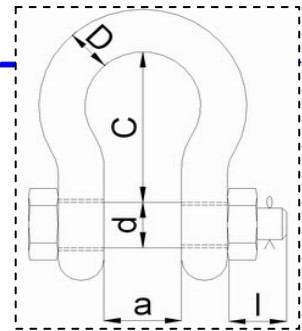
## Certification

Test certificates can be supplied on request surveyed by all official classification societies.

For all these certificates, except for the first two, additional costs are charged.

## Green Pin® 'Standard' shackles

- \* Material : body and pin high tensile steel, quenched and tempered.
- \* Safety factor : 6times WLL = minimum breaking strength.
- \* Finish : galvanized.
- \* Standard : meets performance requirement of U.S.Federal Specification RR-C-271.
- \* Fatigue rated



Working load limit	Dia bow	Dia pin	Inside width	Inside length		Width of bow	Approx.weight each	
				Chain type	Anchor type			
	D	d	a	C	C	2r	Screw pin	Safety pin
tons	mm	mm	mm	mm	mm	mm	kg	kg
0.33	5.0	6.0	9.5	19.0	22.0	16.0	0.02	
0.50	7.0	8.0	12.0	25.0	29.0	20.0	0.06	0.07
0.75	9.0	10.0	13.5	27.0	32.0	21.0	0.11	0.13
1.00	10.0	11.0	17.0	31.0	36.5	26.0	0.15	0.17
1.50	11.0	12.0	18.5	37.0	43.0	29.0	0.21	0.25
2.00	13.5	16.0	22.0	43.0	51.0	32.0	0.37	0.44
3.25	16.0	19.0	27.0	51.0	64.0	43.0	0.65	0.79
4.75	19.0	22.0	31.0	59.0	76.0	51.0	1.06	1.26
6.50	22.0	25.0	36.0	73.0	83.0	58.0	1.56	1.88
8.50	25.0	28.0	43.0	85.0	95.0	68.0	2.32	2.78
9.50	28.0	32.0	47.0	90.0	108.0	75.0	3.28	3.87
12.00	32.0	35.0	51.0	94.0	115.0	83.0	4.51	5.26
13.50	35.0	38.0	57.0	115.0	133.0	92.0	5.93	6.94
17.00	38.0	42.0	60.0	127.0	146.0	99.0	7.89	8.79
25.00	45.0	50.0	74.0	149.0	178.0	126.0	13.40	14.99
35.00	50.0	57.0	83.0	171.0	197.0	138.0	18.85	20.65
42.50	57.0	65.0	95.0	190.0	222.0	160.0	26.06	29.01
55.00	65.0	70.0	105.0	203.0	260.0	180.0	37.86	41.05
85.00	75.0	80.0	127.0	230.0	330.0	190.0	58.68	62.24
120.00	90.0	95.0	146.0	267.0	381.0	238.0		110.00