DRUM CLIP

Manual

Version EN 4.0 | April 2024
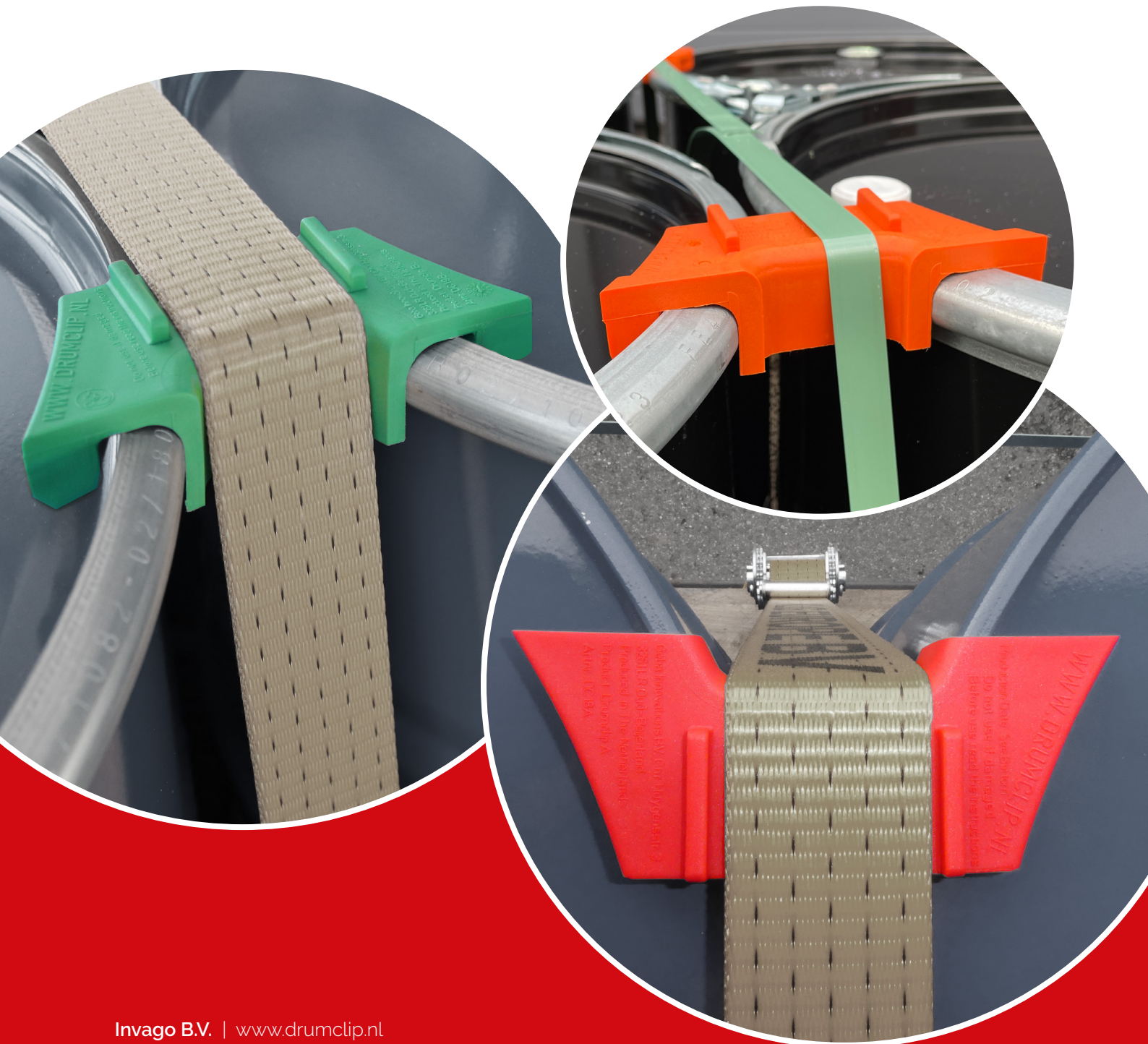
Table of contents

1. Introduction

1.1 General introduction

This manual is designed as a guide for anyone working with the Drumclip, a patented, eco-friendly tool for securing drums on pallets and in trailers.

Drumclip comes in three varieties: the DC18A RED, DC19B GREEN, and DC23C ORANGE, all made from 100% recycled materials.

The RED and GREEN Drumclips meet several certifications including DIN EN 12195-1, ISTA 3E Pallet Stability, EUMOS 40509, and AAR, when used with specific strapping configurations. Currently, the ORANGE Drumclip is certified under EUMOS 40509 with Signode strapping.

Where considered necessary, a specific type of Drumclips is mentioned.

This manual describes all relevant information regarding the Drumclip. This includes:

- How to work with the Drumclip, described in the operating instructions
- Certifications and associated reports, with a QR link to access reports and certificates
- All necessary requirements for using the Drumclip.

This manual serves as a guide for the professional use of the Drumclip as a load securing product. The procedures described for the use of the Drumclip are binding and must be followed.

1.2 How is this manual structured?

After this introduction, Chapter 2 gives an overview of which type of Drumclip has been certified for which application (type of drum) and with what requirements. This manual then provides the relevant Drumclip prescribed for each type of drum. This will be done in 4 separate chapters. Chapter 3 deals with the closed head edge UN200 litre/ 55 gallon drum, also called the tight head drum. Chapter 4 discusses the open head UN200 litre/ 55 gallon drum, also called the open head drum. Chapter 5 discusses the plastic drum. Finally, Chapter 6 covers the ISO open head drum, also called the ISO-drum.

Each chapter includes descriptions, certifications, test methods related to these certifications, the operating instructions for the relevant Drumclip (these operating instructions are leading when the Drumclip is used) and the supplies needed to use the Drumclip. All test reports can be found by scanning the available QR codes per chapter, leading to our website.
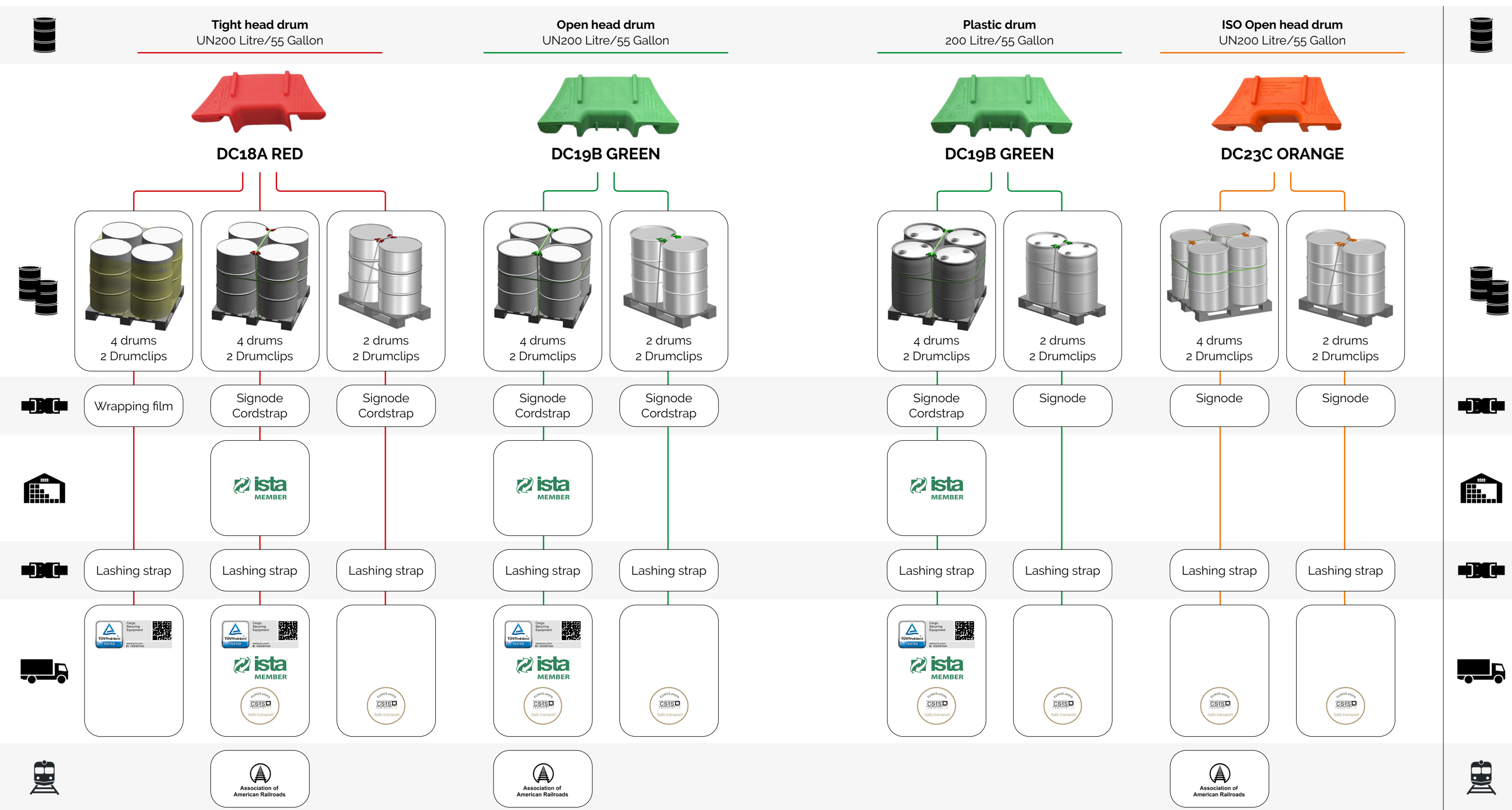
2. Applications

The Drumclip makes it easier to secure drums on a pallet, in a trailer or in a container. This means that the Drumclip can be used for transporting drums on land and at sea (not certified).

The use of the Drumclip for pallet stability of the pallet load with drums is certified according to ISTA 3 E Pallet Stability. The use of the Drumclip for the overland transport of drums is tested and certified by TÜV Rheinland according to DIN EN 12195-1 and EUMOS 40509 Transport Safe for sliding tarpaulin trailers among others. No additional products are required other than the tension strap with which the pallets with drums are secured on the trailer and an anti-slip mat in the trailer under the pallets. More information on the test and certification can be found in Chapters 3.6, 4.6, 5.6 and 6.6.

Table A schematically shows:

1) Which type of Drumclip is needed for the different types of drums;

2) With what requirements can the relevant Drumclip be secured to the drums and pallet; and

3) Which application is certified for storage and transport.

Drumclip at a glance

Tight head drum UN200 Litre/55 Gallon			Open head drum UN200 Litre/55 Gallon		Plastic drum 200 Litre/55 Gallon		ISO Open head drum UN200 Litre/55 Gallon	
DC18A RED			**DC19B GREEN**		**DC19B GREEN**		**DC23C ORANGE**	
4 drums 2 Drumclips	4 drums 2 Drumclips	2 drums 2 Drumclips	4 drums 2 Drumclips	2 drums 2 Drumclips	4 drums 2 Drumclips	2 drums 2 Drumclips	4 drums 2 Drumclips	2 drums 2 Drumclips
Wrapping film	Signode Cordstrap	Signode Cordstrap	Signode Cordstrap	Signode Cordstrap	Signode Cordstrap	Signode	Signode	Signode
	ista MEMBER		ista MEMBER		ista MEMBER			
Lashing strap	Lashing strap	Lashing strap	Lashing strap	Lashing strap	Lashing strap	Lashing strap	Lashing strap	Lashing strap

3. Tight head UN200 litre drum

Drums with a closed head (UN200 litre/ 55 gallon drums) can be recognised by their closed top side (see Figure 1). The DRUMCLIP DC18A RED was designed for these drums.

Figure 1: UN200 litre/ 55 gallon tight head drum

3.1 DRUMCLIP DC18A RED

The DRUMCLIP DC18A RED is a plastic tool which should be used exclusively for tight head UN200 litre/ 55 gallon drums and not for other drums.
Figures 2, 3, 4, 5 and 6 below show the application of the DRUMCLIP DC18A RED on a tight head UN200 litre/ 55 gallon drum.
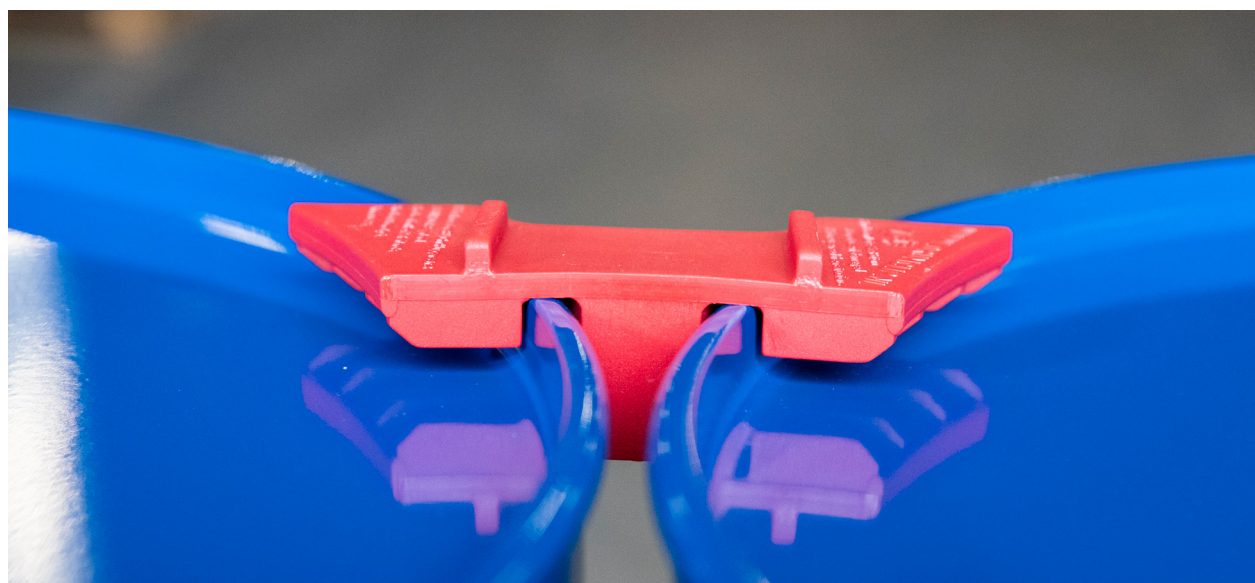

Figure 2: DRUMCLIP DC18A RED between 2 tight head UN200 litre/ 55 gallon drums

Figure 3: DRUMCLIP DC18A RED secured with Cordstrap CC65 &CB6S strap

Figure 4: DRUMCLIP DC18A RED secured with Signode Tenax T2220 Polyester strap

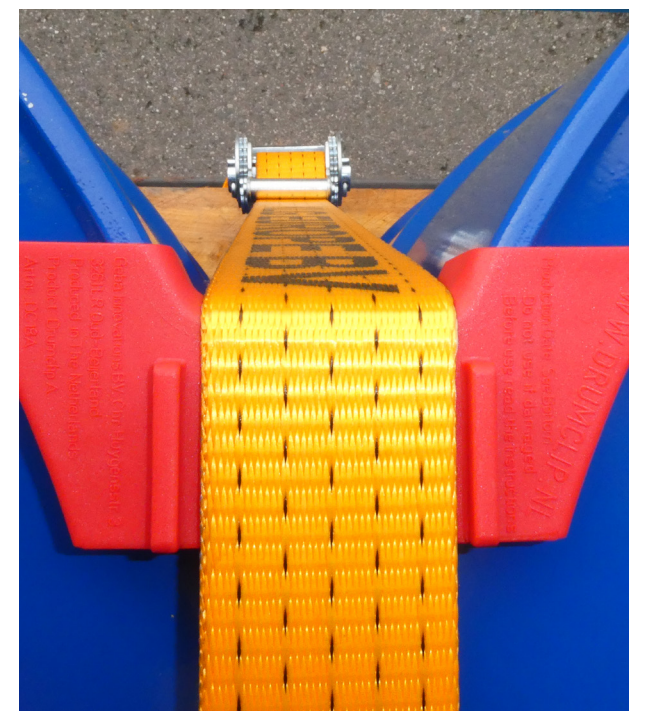*Figure 5: DRUMCLIP DC18A RED secured with universal lashing strap (front view).*

Figure 6: DRUMCLIP DC18A RED secured with universal lashing strap (top view).

3.2 Technical information DRUMCLIP DC18A RED

The DRUMCLIP DC18A RED is made of a glass-fibre reinforced plastic. The base material is mixed with a red dye. The ambient temperature at which the Drumclip may be used lies between -20°C and + 50°C. The dimensions are shown in Figures 7a and 7b.
Each Drumclip shows the following text:

    Geba Innovations BV

    Chr. Huygenstraat 3

    3261 LR Oud-Beijerland

    Produced in The Netherlands

    Product: DRUMCLIP A

    Art. No.: DC18 A

Each Drumclip has a unique article number that can be found under the text. The Drumclip can be used for a maximum of two years after production. Therefore there is a production date on every Drumclip. The Drumclip is certified for 2 years after the production date. Once these 2 years have passed, the Drumclip can no longer be used. The date stamp can be found in the following location in Figure 8.
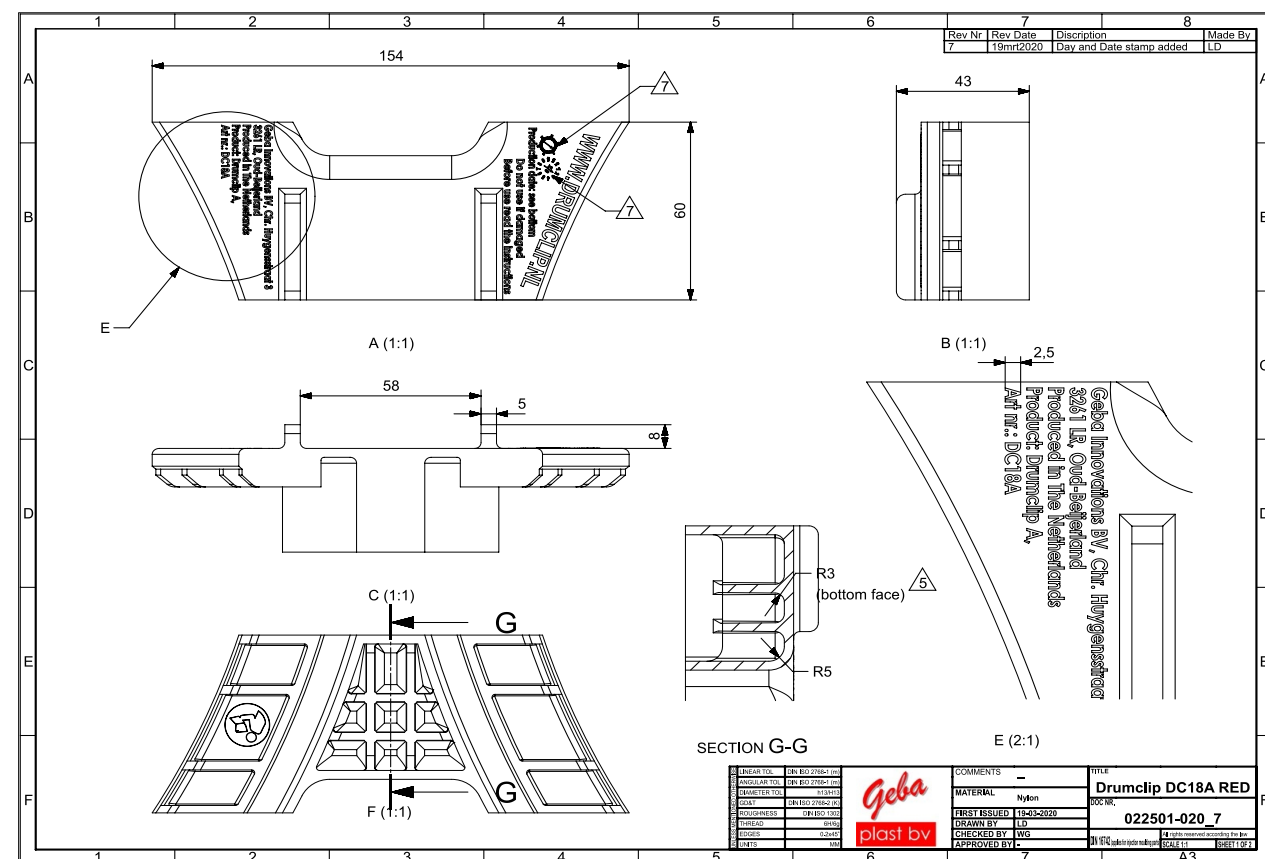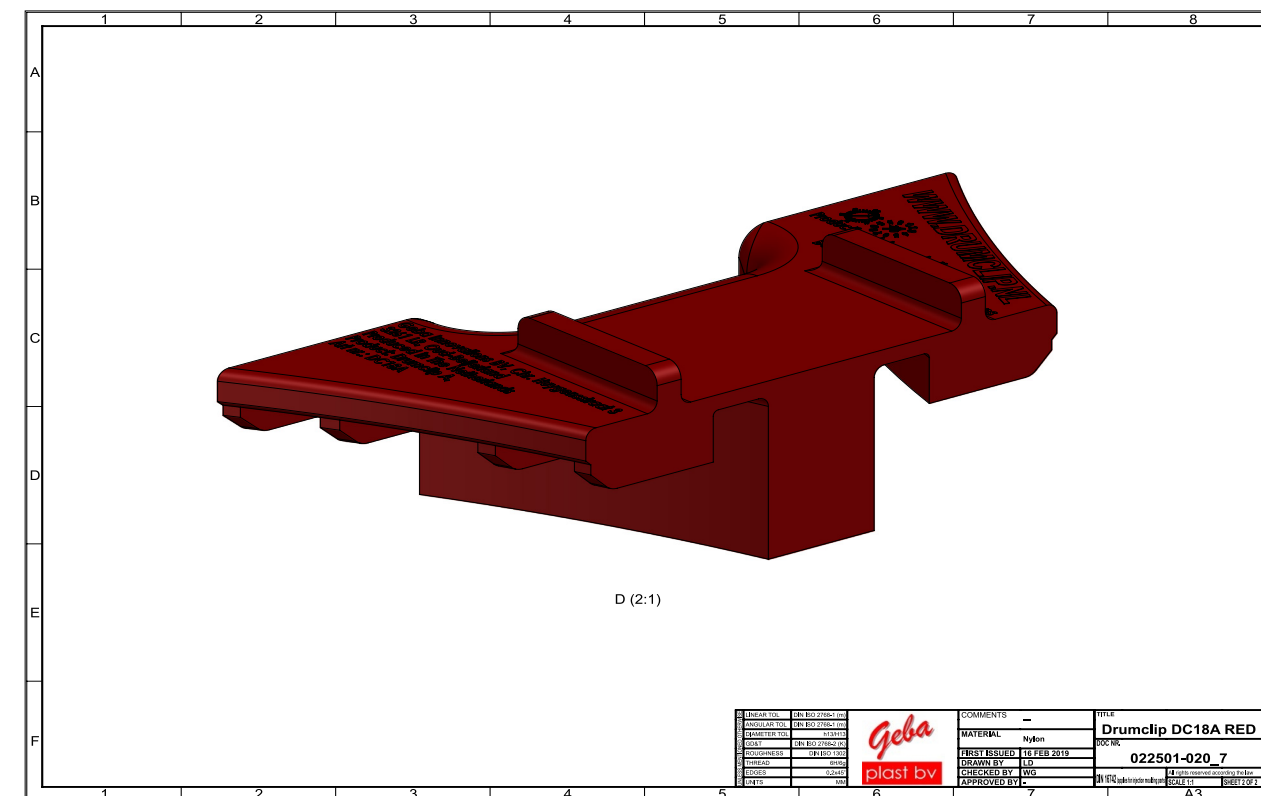

Figure 7a: 2D drawing DRUMCLIP DC18A RED

Figure 7b: Isometric view DRUMCLIP DC18A RED

Left arrow is at 4: 4th day of the month. Right arrow is at 2: 2nd month of the year, February. The number where the arrow runs through is 20: represents the year.
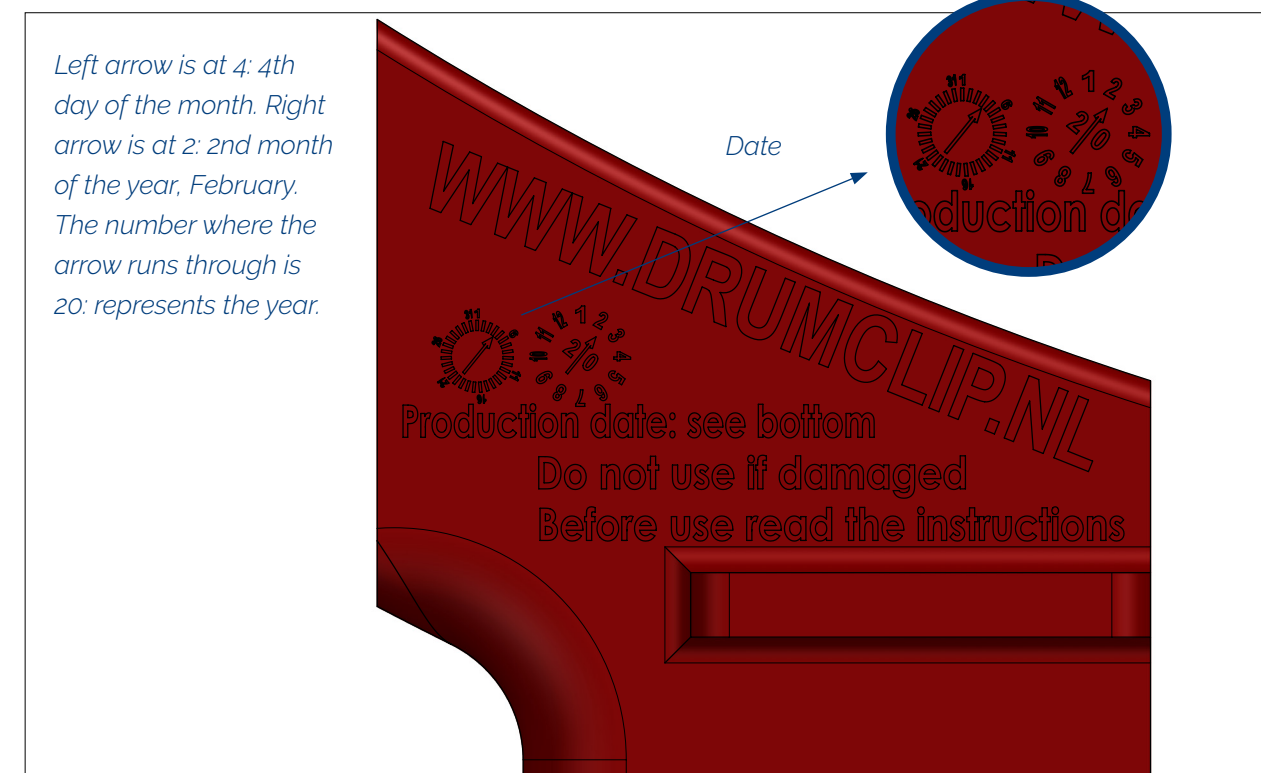
Date

Figure 8: Stamp of production date DC18A RED

3.3 Certification DRUMCLIP DC18A RED

3.3.1 DIN EN 12195-1 | Load Securing

The Drumclip has been tested by TÜV Rheinland, in accordance with DIN EN 12642 Annex B for the guidelines according to Load Securing DIN EN 12195-1. The certificate can be found in Figures 9a, b and c. The link to the test report can be found in Chapter 3.6 Test Reports | DRUMCLIP DC18A RED.
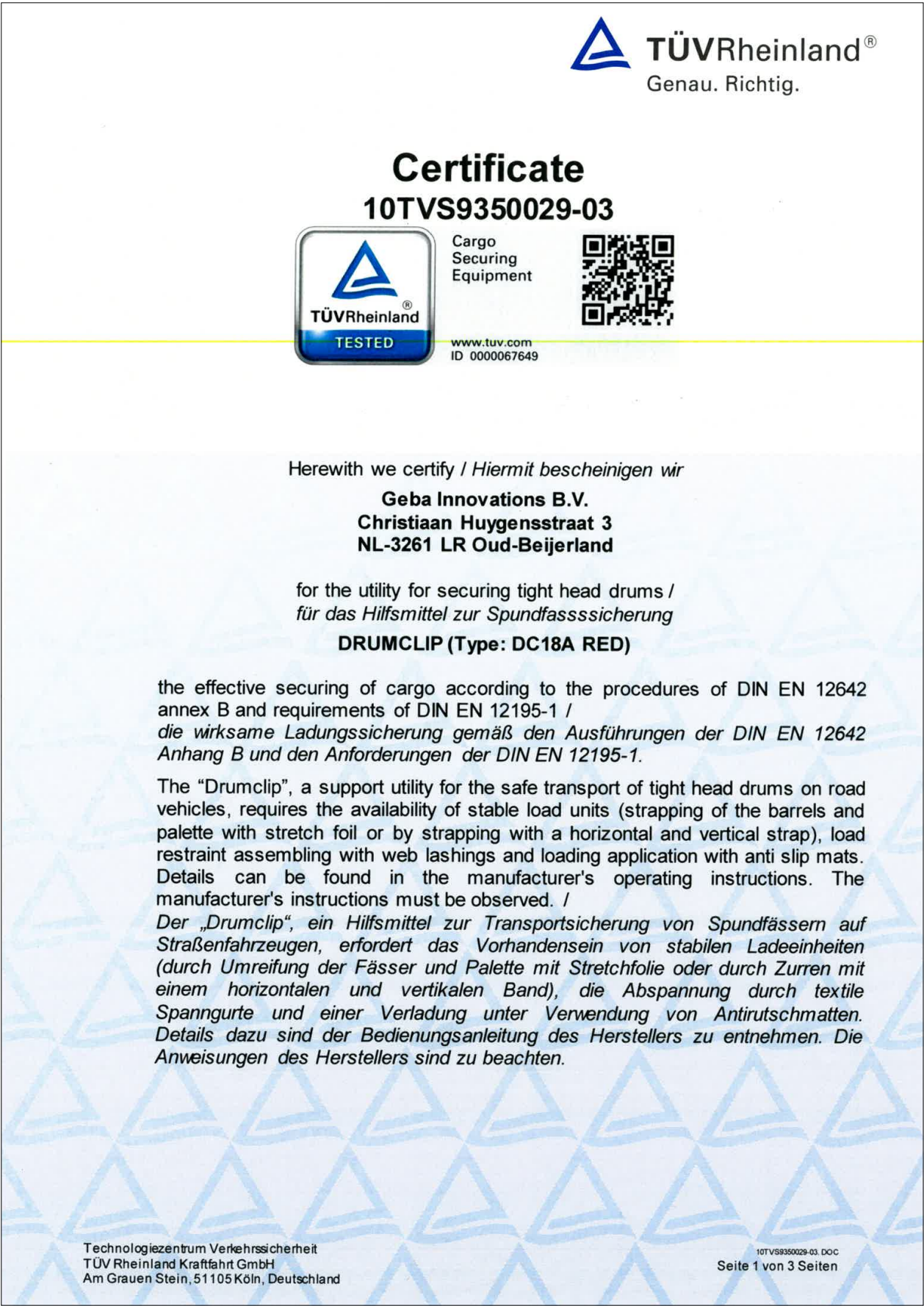
Figure 9a

Figure 9b

The product has been tested by TÜV Rheinland Kraftfahrt GmbH for its suitability as a load securing aid. In addition to the basically required driving dynamics tests, tests were also carried out on mechanical safety, ageing resistance, pollutant content and completeness and comprehensibility of the instructions for use.
Furthermore, the manufacture of the product is subject to annual monitoring by TÜV Rheinland LGA Product GmbH /
Das Produkt wurde durch die TÜV Rheinland Kraftfahrt GmbH auf seine Eignung als Ladungssicherungshilfsmittel getestet. Dazu wurden neben den grundsätzlich erforderlichen fahrdynamischen Prüfungen zusätzlich Prüfungen zu mechanischer Sicherheit, Alterungsbeständigkeit, Schadstoffinhalt und Vollständigkeit & Verständlichkeit der Gebrauchsanleitung durchgeführt.
Weiterhin unterliegt die Fertigung des Produktes einer jährlichen Überwachung durch die TÜV Rheinland LGA Produkte GmbH.

The test results are documented in the following reports / *Die Prüfergebnisse sind in folgenden Berichten dokumentiert*: 195XS0017-03 (TRK), 60224650-001 (TRLP), 60223641-002 (FI TRLP) / 40-2021-02-000563-G001 (FUI TRLP).

This certificate is valid until / *Dieses Zertifikat ist gültig bis*: 18.03.2025

Cologne, March 22nd, 2022 / Köln, 22. März 2022

Uwe Ziegler
Head of Department
EG/ECE FMVSS
Mobility

Thomas Husemann
Head of Department
Vehicle and Component Testing
Mobility

Figure 9c

3.3.2 ISTA 3 E Pallet Stability

The Drumclip is certified for pallet stability according to ISTA 3E Pallet Stability. According to these certifications, the right pallet stability can be created in combination with the right strap and Drumclip. Either Signode or Cordstrap can be chosen. The link to the test reports can be found in Chapter 3.6 Test Reports | DRUMCLIP DC18A RED.

ISTA 3 E Pallet Stability	Signode	(Figure 10a)
Item	Description	Specifications
Pallet type	CP-9	Chemicals Pallet,1140x1140x156mm.
Drums	Tight head UN200/55 gallon	4 pieces
Straps	Signode Tenax 2220 Strapping	Polyester	width: 19mm, thickness: 0,89mm	1x horizontal, 1x vertical (2 in total)
Machine setting	Signode BXT3-19	2500 N
Type of Drumclip	DC18A	2 Pieces

ISTA 3 E Pallet Stability	Cordstrap	(Figure 10b)
Item	Description	Specifications
Pallet type	CP-9	Chemicals Pallet,1140x1140x156mm.
Drums	Tight head UN200/55 gallon	4 pieces
Straps	Cordstrap CC65	Polyester	width: 19mm, thickness: 0,97mm	1x horizontal, 1x vertical (2 in total)
Buckle	CB6S	Galvanised steel (2 pieces)
Machine setting	CT25	see specifications Cordstrap Figure 12
Type of Drumclip	DC18A	2 Pieces

Figure 10a

Figure 10b

3.3.3 EUMOS 40509 Transport Safe

The Drumclip is certified for pallet stability and transport according to EUMOS 40509 Transport Safe for both 2 and 4 drums on a pallet. According to these certifications, the right pallet stability can be created in combination with the right strap and Drumclip. Either Signode or Cordstrap can be chosen. The link to the test report can be found in Chapter 3.6 Test Reports | DRUMCLIP DC18A RED.

EUMOS 40509 Transport Safe	Signode	(Figure 10a + 10c)
Item	Description	Specifications
Pallet type	CP-9 (4 drums)	4 drums: 1140x1140x156mm
	Custom Pallet (2 drums)	2 drums: 600x1140x156mm
Drums	Tight head UN200/55 gallon	2 or 4 pieces
Straps	Signode Tenax 2220 Strapping	Polyester	width: 19mm, thickness: 0,89mm	1x horizontal, 1x vertical (2 in total)
Machine setting	Signode BXT3-19	2500 N
Type of Drumclip	DC18A	2 Pieces

EUMOS 40509 Transport Safe	Cordstrap	(Figure 10b + 10c)
Item	Description	Specifications
Pallet type	CP-9 (4 drums)	4 drums: 1140x1140x156mm
	Custom Pallet (2 drums)	2 drums: 600x1140x156mm
Drums	Tight head UN200/55 gallon	2 or 4 pieces
Straps	Cordstrap CC65	Polyester	width: 19mm, thickness: 0,97mm	1x horizontal, 1x vertical (2 in total)
Buckle	CB6S	Galvanised steel (2 pieces)
Machine setting	CT25	see specifications Cordstrap Figure 12
Type of Drumclip	DC18A	2 Pieces

Figure 10c: Showing 2 drums on a pallet

3.4 Requirements DRUMCLIP DC18A RED

The certification DIN EN 12195-1 Load Securing, ISTA 3 E Pallet Stability and EUMOS 40509 Transport Safety of the DRUMCLIP DC18A RED was obtained in combination with supplies from both Signode and Cordstrap. See also Chapter 2 Applications.

3.4.1 Signode

Signode's requirements for meeting the above certifications are:

- Signode Tenax T2220 Polyester straps (Figure 11a)
- Signode BXT3 – 19 strapping machine (Figure 11b)

SIGNODE®

Tenax 2220 (19*0,89)

PRODUCT DATA SHEET

This is to certify that the product supplied by us is manufactured according to quality procedures in compliance with ISO 9001, ISO14001, EN 13891 and EN 13394.
Made of 100% of recycled PET

Produced in Netherlands

Product description		
Product designation:		Tenax 2220 (19*0,89)
Item code:		670273
Material type:		Polyester
Production technology:		Strand
Surface:		Flat
Colour:		Green

Strap properties	Minimum	Nominal	Maximum
Width (mm):	18.4	19	19.6
Thickness (mm):	0.84	0.89	0.94
Elongation (%):	10		15
Break Strength (daN):	675	750	

Coils details	
Coil Type:	standard
Coil Inside Diameter (mm):	408
Coil Outside Diameter (mm):	610
Coil Width (mm):	153
Net Coil Weight (kg):	24.684
Meters per coil:	1100

Pallet details	
Package Dimensions (LxWxH):	1200 x 1200 x 1100
Number of Coils per Pallet:	24
Approx. Gross Weight per Pallet (kg):	646

Date of issue: 19/02/2020

Figure 11a

Technical Data Sheet BXT3-19

Strapping tool	BXT3-19
Operation mode	auto / semi / manual
Tension force range Standard	1300 – 4500N (290 – 1000 lbf)
Soft	400 – 1600 (90 – 340 lbf)
Variable tension speed range	0 – 120 mm/s (4,7 in/s)
Weight (incl. battery)	4,3 kg (9,5 lb)
Dimensions (L x W x H)	370 x 143 x 135 mm
	15.5" x 5.6" x 5.3"
Working temperature	-10°C to +40°C (14-104 °F)
Relative humidity	up to 90%
Battery / Charger	
Charger type	Bosch
Battery charger voltage	100 or 110 or 230 V
Charging time	25-35 min.
Battery type	Bosch Li-ion 18V, 4.0 Ah
Cycles per battery charge	
- Low tension	800
- Medium tension	500
- High tension	300
Strap	
Strap	PET (Polyester)
	PP (Polypropylene)
Width	15-16, 18-19 mm (5/8", 3/4")
Thickness	0,8-1,3 mm (.031"-0.51")
Features	
Real time indication of applied tension force	√
Variable tension speed	√
Favorite strapping function	√
Display color indication for tool status information	√
Strap alignment indication	√
Strap dust blow out vent	√
Battery protection	√
0-Tension welding	√

Figure 11b

3.4.2 Cordstrap

Cordstrap's requirements for meeting the above certifications are:

- Cordstrap CC65 & CB6S (see Figure 12)

Figure 12 - page 1

3.5 Operating Instructions DRUMCLIP DC18A RED

Main steps to be taken before using the Drumclip:

- Check the Drumclip for any damages.
- Check the production date on the upper side of the Drumclip. The Drumclip must not be used for more than 2 years after the production date.
- The Drumclip may be cleaned with water and soap.
- If the Drumclip has been in contact with chemicals, it may no longer be used.
- The Drumclip may only be used on trucks with a gross weight of 3,500 kg or more.
- Drumclips must be stored in dry, moderately heated conditions and protected from sunlight and mechanical damage.
- The Drumclip may not be dried or stored near fire or in places with elevated temperatures.
- The maximum temperature at which the Drumclip can be used is -20C Degrees Celsius + 50 Degrees Celsius.

There are 3 operating instructions of the DRUMCLIP DC18A RED including a step-by-step plan.

- Figure 13a is the operating instruction in combination with wrapping film.
- Figure 13b is the operating instruction in combination with Signode Tenax T2220
- Figure 13c is the operating instruction in combination with Cordstrap CC65 &CB6S

The operation instructions must always be followed.

Figure 12 - page 2

DRUM CLIP

Operating Instructions DC18A RED
for tight head drums in combination with wrapping film

Operating Instructions DRUMCLIP DC18A RED

The DRUMCLIP DC18A RED is an innovative tool that makes it safer and easier to secure 200 litre / 55 gallon tight head drums to a pallet and/or trailer, without the use of additional pallets or other equipment. The DC18A has been tested with a 0.8g brake delay in combination with wrapping film. This solution is DIN EN 12195-1 certified. This combination can be used for transport and pallet stabilisation of UN 200 litre / 55 gallon tight head drums on pallets. For the certifications we refer to our website drumclip.nl

Important information

● Check the Drumclip before use. A damaged Drumclip may not be used again.
● Check the production date on the upperside of the Drumclip. The Drumclip must not be used for longer than 2 years after the production date.
● The Drumclip can be cleaned with water and soap.
● If the Drumclip has been in contact with chemicals, it may no longer be used.
● The Drumclip may only be used on trucks of 3.500 kg (7.716 lbs) or more.
● Drumclips must be kept in dry, moderately heated conditions and protected from sunlight and mechanical damage.
● The Drumclip may not be dried or stored near fire or in places with elevated temperatures.
● The Drumclip has been tested according to DIN EN12195-1, load securing by TUV Rheinland.
● The Drumclip is designed for use in sliding sail trailers (tautliners).

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TESTED
Cargo Securing Equipment
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ID 0000067649

The Drumclip is produced by Geba Innovations
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3261 LR Oud-Beijerland, The Netherlands
info@drumclip.nl - www.drumclip.nl

Step 1

Place four drums on a wooden pallet. Wrap the drums by use of a pallet wrapper, while also wrapping the pallet. Provide at least 8 wraps of film around the drums and the pallet. Use film that is at least 28mu thick and 500mm (1,6 ft) wide. Do this with each pallet with drums to be transported.

Step 2

Place the pallets of drums (using a forklift truck) on the trailer in double rows.
Place the pallets on anti-slip mats that have a minimum friction resistance of 0.6u.

Double row

Figure 13a - page 1

DRUM CLIP

Operating Instructions DC18A RED
for tight head drums in combination with wrapping film

Step 3

On each side of the trailer, place a Drumclip over the flanged edges of two drums that are on the same pallet. Make sure that the flanges of the drums fall well into the flange channels of the Drumclip and that the wide side of the Drumclips face outwards.

Step 4

Use a tension strap with a minimum StF value of 350 DaN for a double row of drums. In this way, drums can be secured as shown in the illustration. Consult the guidelines for the lashing strap here.
Place the strap over the drums and the Drumclips, so that the strap is between the strap guides of the Drumclip. Make sure that the strap is not twisted.

Step 5

Then attach the strap hooks to the anchor point on the vehicle. Use an ergo ratchet and a lashing strap (50m/0,16ft LC=2.500 daN) to secure the pallets with drums to the vehicle. Lead the strap into the ergo ratchet and hand-tension with a force of SHF daN (50 kilograms / 110 lbs). The strap should be at a 90-degree angle to the direction of travel and attached to the vehicle in line with the Drumclips. Perform steps 3, 4 and 5 for each row of pallets and drums.

A fully loaded trailer looks like this:

Double row

Figure 13a - page 2

DRUMCLIP

Operating Instructions DC18A RED
for tight head drums in combination with Signode

Operating Instructions DRUMCLIP DC18A RED

in combination with two Signode Tenax T2220 (19x0.89mm / 0,75x0,04") straps. The DRUMCLIP DC18A RED is an innovative tool, that makes it **safer** and **easier** to secure 200 litre / 55 gallon tight head drums on a pallet and/or trailer, without the use of additional pallets or other equipment. The DC18A has been tested with a 0.8g brake delay in combination with straps (Signode Tenax 2220). This solution is DIN EN 12195-1, ISTA 3 E Pallet Stability and EUMOS 40509 Transport Safe certified. This combination is suitable for transport and pallet stabilisation of UN 200 litre / 55 gallon tight head drums on pallets. For the certifications we refer to our website drumclip.nl

Important information

- Check the Drumclip before use. A damaged Drumclip may not be used again.
- Check the production date on the upperside of the Drumclip. The Drumclip must not be used for longer than 2 years after the production date.
- The Drumclip can be cleaned with water and soap.
- If the Drumclip has been in contact with chemicals, it may no longer be used.
- The Drumclip may only be used on trucks of 3.500 kg (7.716 lbs) or more.
- Drumclips must be kept in dry, moderately heated conditions and protected from sunlight and mechanical damage.
- The Drumclip may not be dried or stored near fire or in places with elevated temperatures.

Step 1

Place four drums on a wooden pallet. Place two Drumclips opposite each other between two drums, with the wide side facing outwards. Use two Signode Tenax T2220 straps. One strap is stretched horizontally in the middle of the drums. The other strap is stretched vertically across the two drum clips and under the pallet. Both straps should be tensioned with a force of 2,500 N. Do this with each pallet of drums to be transported.

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When using two drums on a pallet, follow the same procedure as step 1.

Step 2

Place the pallets with drums (with a forklift truck) on the trailer (in single or double rows) in such a way that the Drumclips are visible at the side of the trailer (the tension strap will be put on these later). Place the pallets on anti-slip mats that have a minimum friction resistance of 0.6u.

Double row

Figure 13b - page 1

DRUMCLIP

Operating Instructions DC18A RED
for tight head drums in combination with Signode

Step 3

Use a securing strap with a minimum StF value of 350 DaN for a double row of drums. This way drums can be secured as shown in the illustration. Consult the guidelines of the lashing strap here.

Place the strap across the drums and the Drumclips, so that the strap is between the strap guides of the Drumclip. Make sure the strap is not twisted.
The strap should be placed on both sides of the vehicle under the horizontal strap that goes around the drums.

Then attach the strap hooks to the anchor points on the vehicle. Use an ergo ratchet and a lashing strap (50mm/1,97" LC=2,500 daN) to secure the drumpallets to the vehicle.
Lead the strap into the ergo ratchet and hand-tension with a force of SHF daN (50 kilograms / 110 lbs).
The strap should be at a 90-degree angle to the direction of travel and attached to the vehicle in line with the Drumclips.

A fully loaded trailer looks like this:

Double row

Figure 13b - page 2

Operating Instructions DC18A RED
in combination with Cordstrap for tight head drums

Operating Instructions DRUMCLIP DC18A RED
In combination with two Cordstrap CC 65 Composite Strapping (19mm; ¾"), straps and two CB6S Buckle (19mm, ¾").

The DRUMCLIP DC18A RED is an innovative tool that makes it safer and easier to secure 200 litre / 55 gallon tight head drums on a pallet and/or trailer without the use of additional pallets or other equipment. The DC18A has been tested with a 0.8g brake delay in combination with straps (Cordstrap CC65 Composite Strapping + CB6S Buckle). This solution is DIN EN 12195-1, ISTA 3 E Pallet Stability and EUMOS 40509 Transport Safe certified. This combination is suitable for transport and pallet stabilisation of UN 200 litre / 55 gallon tight head drums on pallets. For the certifications we refer to our website drumclip.nl

Important information
- Check the Drumclip before use. A damaged Drumclip may not be used again.
- Check the production date on the upperside of the Drumclip. The Drumclip must not be used for longer than 2 years after the production date.
- The Drumclip can be cleaned with water and soap.
- If the Drumclip has been in contact with chemicals, it may no longer be used.
- The Drumclip may only be used on trucks of 3.500 kg (7.716 lbs) or more.
- Drumclips must be kept in dry, moderately heated conditions and protected from sunlight and mechanical damage.
- The Drumclip may not be dried or stored near fire or in places with elevated temperatures.

Step 1
Place four drums on a wooden pallet.
Place two Drumclips opposite each other between two drums on the outside of the drums with the wide side facing outwards. Use two Cordstrap CC 65 Composite Strapping and two CB 6S Buckles. One strap is stretched horizontally in the middle of the drums. The other strap is stretched vertically across the two Drumclips and under the pallet. The Buckle is used to connect the straps. Make sure that the position of the Buckle is not on the outside of the trailer or on top of the drums.

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info@drumclip.nl - www.drumclip.nl

For the correct positioning of the buckle and the tension of the straps we recommend consulting the Cordstrap strapping instructions. The above step should be carried out for each pallet of drums.

When using two drums on a pallet, follow the same procedure as step 1.

Figure 13c - page 1

Operating Instructions DC18A RED
in combination with Cordstrap for tight head drums

Step 2
Place the pallets with drums (using the forklift truck) in the trailer (in single or double rows). Place the pallets on anti-slip mats with a minimum friction resistance of 0.6 Mu.

Step 3
Use a tension strap with a minimum StF value of 350 DaN for a double row of drums. In this way, the drums can be secured as shown in the illustration. Consult the guidelines for the tensioning strap here.

Place the strap across the drums and the Drumclips, so that the strap is between the strap guides of the Drumclip. Make sure the strap is not twisted. The strap should be placed on both sides of the vehicle under the horizontal strap that goes around the drums.
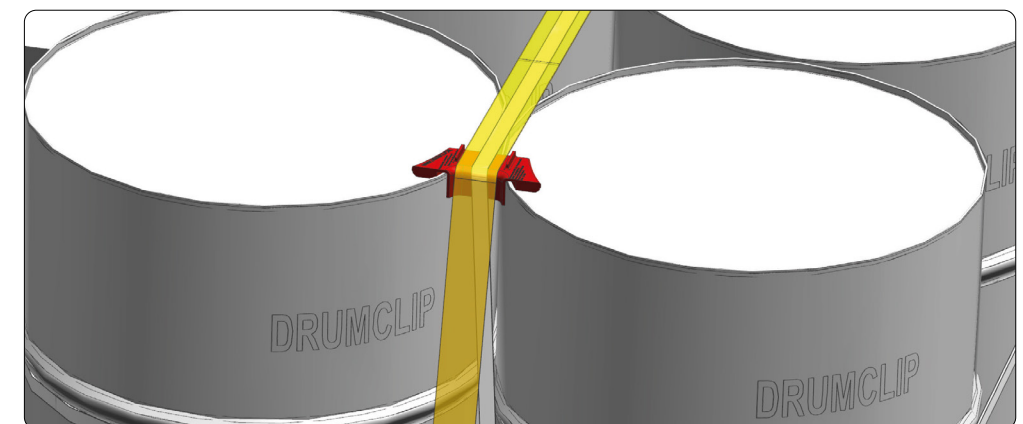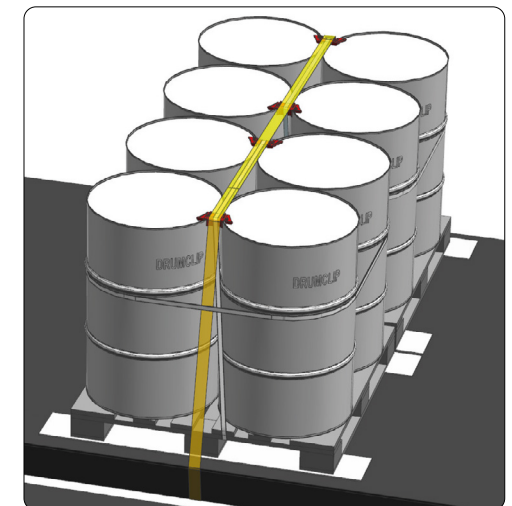
Step 4
Then attach the strap hooks to the anchor points on the vehicle. Use an ergo ratchet and a strap (50mm/1,97" LC=2.500 daN) to secure the drum pallets to the vehicle.
Lead the strap into the ergo ratchets and hand-tension with a force of SHF daN (50 kilograms / 110 lbs). The strap should be at a 90-degree angle to the direction of travel and attached to the vehicle in line with the Drumclips.

Figure 13c - page 2

3.6   Test Reports | DRUMCLIP DC18A RED

The complete test reports from the authorities listed below can be found on our website.

By scanning the QR code, you will immediately be taken to the correct drumclip.nl website page.

The URL where you can find the test reports is: https://drumclip.nl/how-to-use/

The test reports for the DRUMCLIP DC18A RED are issued by the following authorities:

- TÜV Rheinland Group

- IPS Technology | ISTA Certified Testing Laboratory

- CS-TS | EUMOS Certified Testing Laboratory
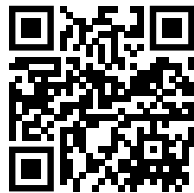
4. Open head UN200 litre drum

Drums with an open head (UN200 litre/ 55 gallon drums) can be recognised by an open top edge that can be closed with a loose lid and a sealing ring (see Figure 14). The DRUMCLIP DC19B GREEN has been designed for these drums.

Figure 14: UN200 litre/ 55 gallon open head drum

4.1 DRUMCLIP DC19B GREEN

DRUMCLIP DC19B GREEN is a plastic tool that should be used for open head UN200 litre/ 55 gallon drums. The DRUMCLIP DC19B GREEN can also be used for securing Plastic drums (see Chapter 5) to pallets (not for use of plastic drums during transport). Figures 15, 16, 17 and 18 below show the use of DRUMCLIP DC19B GREEN on an open head UN200 litre/ 55 gallon drum.
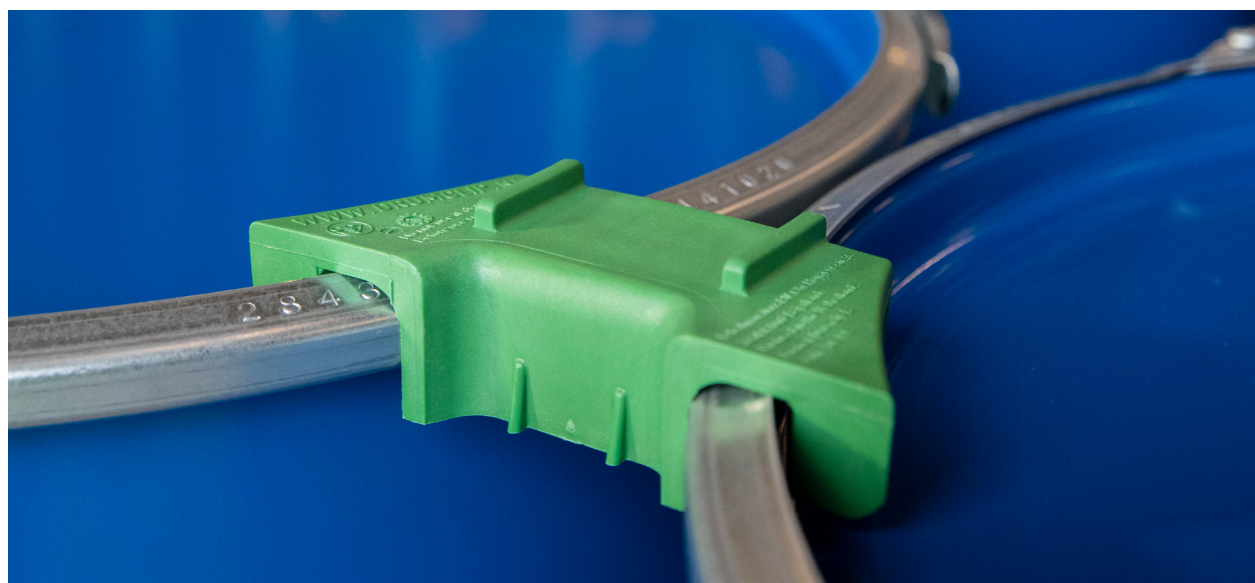
Figure 15: DRUMCLIP DC19B GREEN between 2 open head UN200 litre/ 55 gallon drums

Figure 16: DRUMCLIP DC19B GREEN secured with Cordstrap CC65 &CB6S strap

Figure 17: DRUMCLIP DC19B GREEN secured with Signode Tenax T2220 Polyester strap

Figure 18: DRUMCLIP DC19B GREEN secured with universal lashing strap.

4.2 Technical information DRUMCLIP DC19B GREEN

The DRUMCLIP DC19B GREEN is made of a glass-fibre reinforced plastic base material mixed with a green dye. The ambient temperature at which the Drumclip may be used lies between -20°C and + 50°C. The technical specifications are shown in Figures 19a and 19b. Each Drumclip can be recognised by the text:

> Geba Innovations BV
>
> Chr. Huygenstraat 3
>
> 3261 LR Oud-Beijerland
>
> Produced in The Netherlands
>
> Product: DRUMCLIP B
>
> Art. Nr: DC19B

Each Drumclip has a unique article number that can be found under the text. The Drumclip can be used for a maximum of two years after production. Therefore, there is a production date on every Drumclip. The Drumclip is certified for 2 years after the production date. Once these 2 years have passed, the Drumclip may no longer be used. The date stamp is shown in the following location in Figure 20.
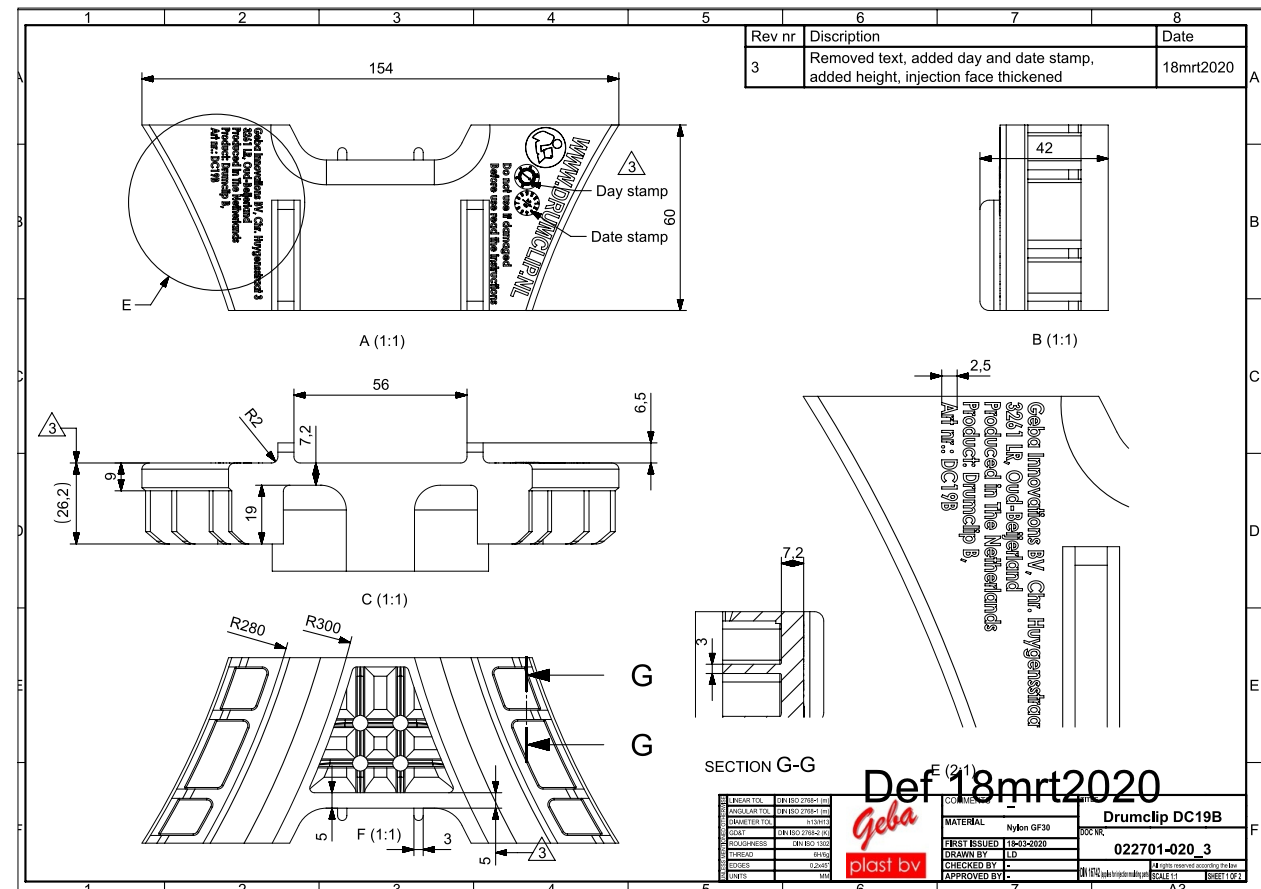
Figure 19a: 2D drawing DRUMCLIP DC19B GREEN
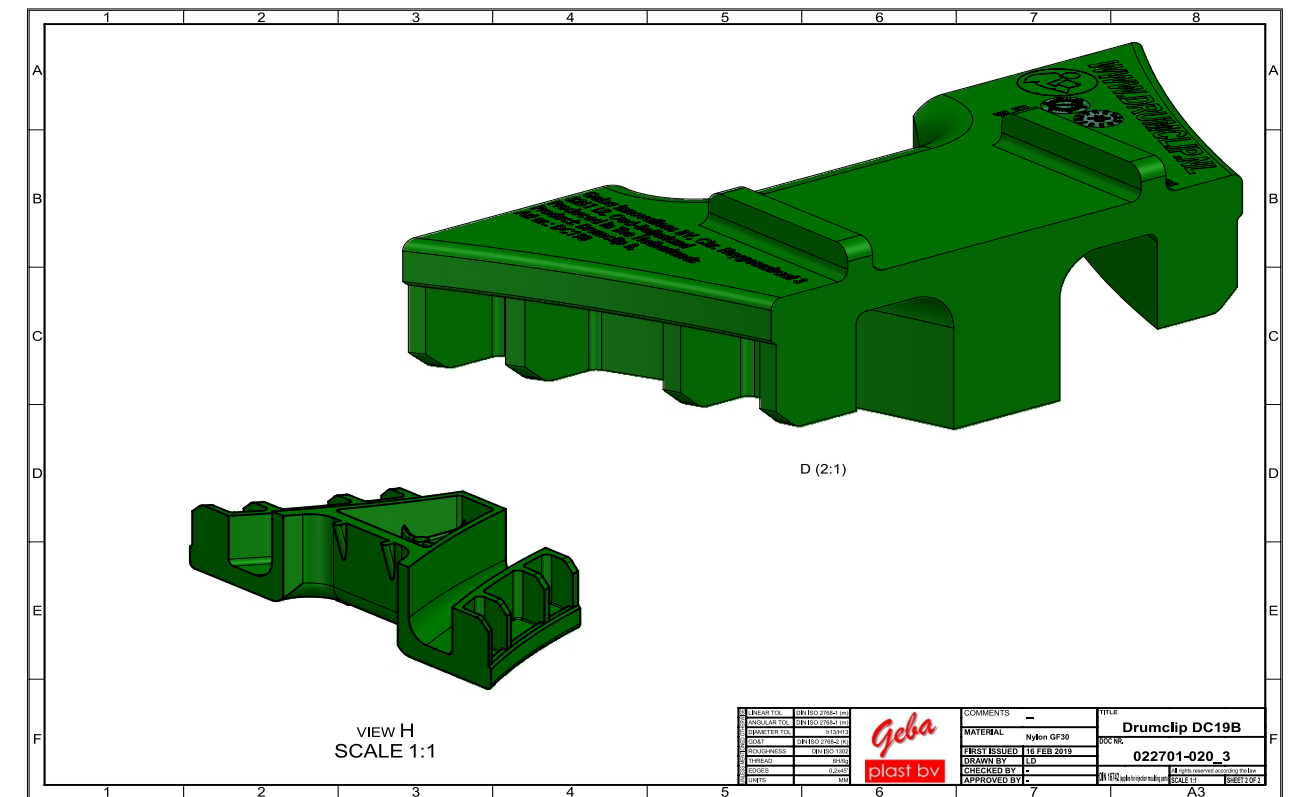
Figure 19b: Isometric view DRUMCLIP DC19B GREEN

Left arrow is at 4: 4th day of the month. Right arrow is at 2: 2nd month of the year, February. The number through which the arrow passes is 20: represents the year.

Date

Figure 20: Stamp production date DC19B GREEN

4.3 Certification DRUMCLIP DC19B GREEN

4.3.1 DIN EN 12195-1 | Load securing

The Drumclip has been tested by TÜV Rheinland, in accordance with DIN EN 12642 Annex B for the guidelines according to load securing DIN EN 12195-1. The certificate can be found in Figure 21a, b and c. The link to the test report can be found in Section 4.6 Test Reports | DRUMCLIP DC19B GREEN.
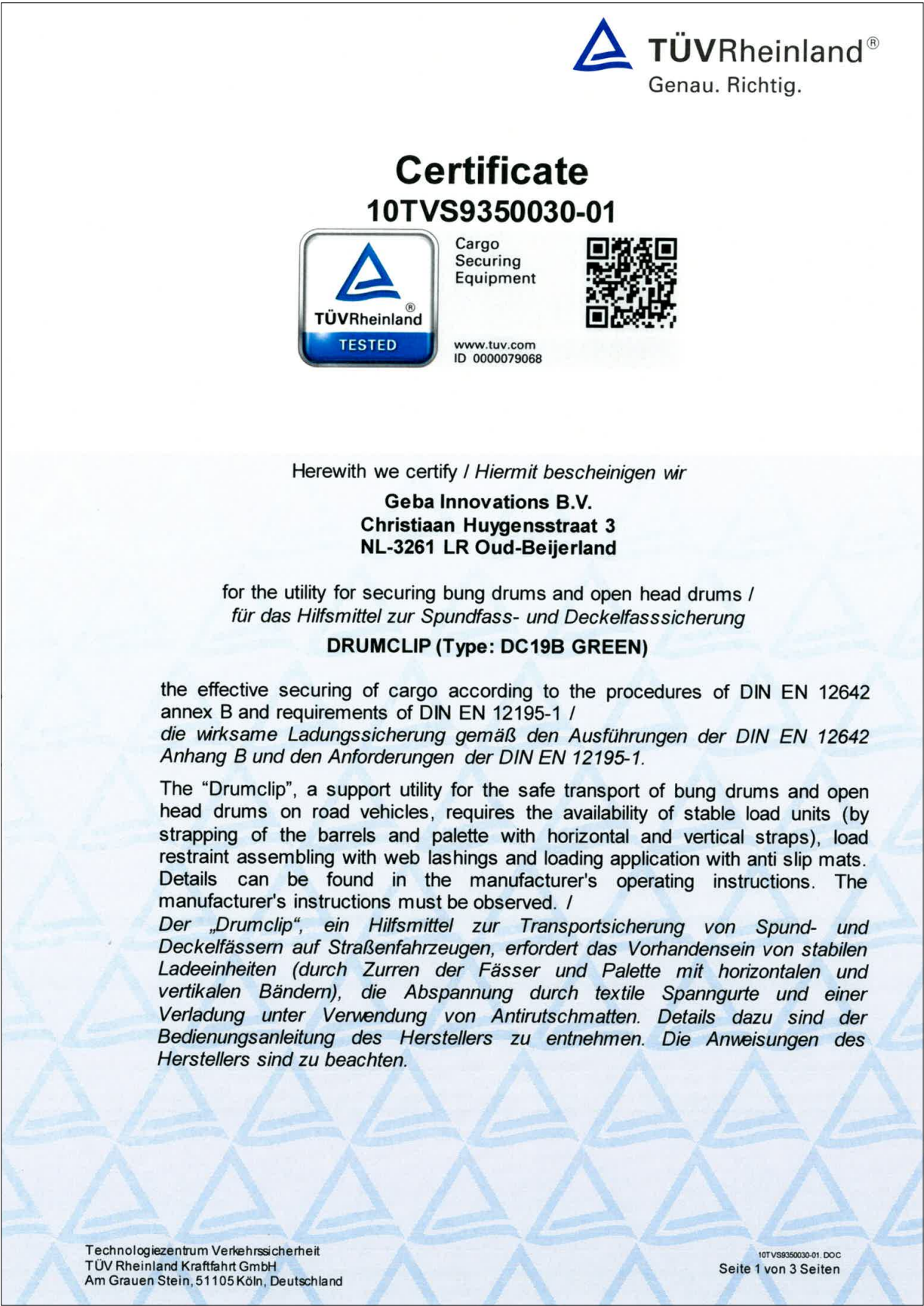
Figure 21a

Figure 21a

TÜVRheinland®
Genau. Richtig.

Certificate
10TVS9350030-01

Cargo Securing Equipment

TÜVRheinland® TESTED
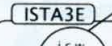
www.tuv.com
ID 0000079068

HOW TO USE..
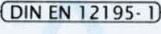
Figure 21b
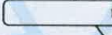
Technologiezentrum Verkehrssicherheit
TÜV Rheinland Kraftfahrt GmbH
Am Grauen Stein, 51105 Köln, Deutschland

10TVS9350030-01. DOC
Seite 2 von 3 Seiten

TÜVRheinland®
Genau. Richtig.

Certificate
10TVS9350030-01

Cargo Securing Equipment

TÜVRheinland® TESTED

www.tuv.com
ID 0000079068

The product has been tested by TÜV Rheinland Kraftfahrt GmbH for its suitability as a load securing aid. In addition to the basically required driving dynamics tests, tests were also carried out on mechanical safety, ageing resistance, pollutant content and completeness and comprehensibility of the instructions for use.
Furthermore, the manufacture of the product is subject to annual monitoring by TÜV Rheinland LGA Product GmbH /
Das Produkt wurde durch die TÜV Rheinland Kraftfahrt GmbH auf seine Eignung als Ladungssicherungshilfsmittel getestet. Dazu wurden neben den grundsätzlich erforderlichen fahrdynamischen Prüfungen zusätzlich Prüfungen zu mechanischer Sicherheit, Alterungsbeständigkeit, Schadstoffinhalt und Vollständigkeit & Verständlichkeit der Gebrauchsanleitung durchgeführt.
Weiterhin unterliegt die Fertigung des Produktes einer jährlichen Überwachung durch die TÜV Rheinland LGA Produkte GmbH.

The test results are documented in the following reports / *Die Prüfergebnisse sind in folgenden Berichten dokumentiert:* 205XS0164-01 (TRK), 40-2021-02-000563-G001 (FUI TRLP).

This certificate is valid until / *Dieses Zertifikat ist gültig bis:* 18.03.2025

Cologne, March 22nd, 2022 / Köln, 22. März 2022

Uwe Ziegler
Head of Department
EG/ECE FMVSS
Mobility

Thomas Husemann
Head of Department
Vehicle and Component Testing
Mobility

Figure 21c

Technologiezentrum Verkehrssicherheit
TÜV Rheinland Kraftfahrt GmbH
Am Grauen Stein, 51105 Köln, Deutschland

10TVS9350030-01. DOC
Seite 3 von 3 Seiten

4.3.2. ISTA 3E Pallet Stability

The Drumclip is certified for pallet stability according to ISTA 3E Pallet Stability. According to these certifications, the right pallet stability can be created in combination with the right strap and Drumclip. Either Signode or Cordstrap can be chosen.

The link to the test reports can be found in Chapter 4.6 Test Reports | DRUMCLIP DC19B GREEN.

ISTA 3 E Pallet Stability	Signode	(Figure 22a)
Item	Description	Specifications
Pallet type	CP-9	Chemicals Pallet,1140x1140x156mm.
Drums	Open head UN200/55 gallon	4 Pieces
Straps	Signode Tenax 2220 Strapping	Polyester	width 19mm, thickness: 0,89mm	1x horizontal, 1x vertical (2 in total)
Machine setting	Signode BXT3-19	2500 N
Type of Drumclip	DC19B	2 pieces

ISTA 3 E Pallet Stability	Cordstrap	(Figuur 22b)
Item	Description	Specifications
Pallet type	CP-9	Chemical Pallet,1140x1140x156mm.
Drums	Open head UN200/55 gallon	4 Pieces
Straps	Cordstrap CC65	Polyester	width: 19mm, thickness: 0,97mm	1x horizontal, 1x vertical (2 in total)
Buckle	CB6S	Galvanised steel (2 pieces)
Machine setting	CT25	see specifications Cordstrap Figure 24
Type of Drumclip	DC19B	2 pieces

Figure 22a

Figure 22b

4.3.3. EUMOS 40509 Transport Safety

The Drumclip is certified for pallet stability and transport according to EUMOS 40509 Transport Safe for both 2 and 4 drums on a pallet. According to these certifications, the right pallet stability can be created in combination with the right strap and Drumclip. Either Signode or Cordstrap can be chosen.

The link to the test report can be found in Chapter 4.6 Test Reports | DRUMCLIP DC19B GREEN.

EUMOS 40509 Transport Safe	Signode	(Figure 22a + 22c)
Item	Description	Specifications
Pallet type	CP-9 (4 drums)	4 drums: 1140x1140x156mm
	Custom Pallet (2 drums)	2 drums: 600x1140x156mm
Drums	Open head UN200/55 gallon	2 or 4 pieces
Straps	Signode Tenax 2220 Strapping	Polyester	width 19mm, thickness: 0,89mm	1x horizontal, 1x vertical (2 in total)
Machine setting	Signode BXT3-19	2500 N
Type of Drumclip	DC19B	2 pieces

EUMOS 40509 Transport Safe	Cordstrap	(Figure 22b + 22c)
Item	Description	Specifications
Pallet type	CP-9 (4 drums)	4 drums: 1140x1140x156mm
	Custom Pallet (2 drums)	2 drums: 600x1140x156mm
Drums	Open head UN200/55 gallon	2 or 4 pieces
Straps	Cordstrap CC65	Polyester	width: 19mm, thickness: 0,97mm	1x horizontal, 1x vertical (2 in total)
Buckle	CB6S	Galvanised steel (2 pieces)
Machine setting	CT25	see specifications Cordstrap Figure 24
Type of Drumclip	DC19B	2 pieces

Figure 22c: Showing 2 drums on a pallet

4.4 Requirements DRUMCLIP DC19B GREEN

The certification DIN EN 12195-1 Load securing, ISTA 3 E Pallet Stability and EUMOS 40509 Transport Safe of the DRUMCLIP DC19B GREEN was obtained in combination with both Signode and Cordstrap supplies. See also Chapter 2 Applications.

4.4.1 Signode

Signode's requirements for meeting the above certifications are:

- Signode Tenax T2220 Polyester straps (Figure 23a)
- Signode BXT3 – 19 strapping machine (Figure 23b)

SIGNODE®

Tenax 2220 (19*0,89)

PRODUCT DATA SHEET

This is to certify that the product supplied by us is manufactured according to quality procedures in compliance with ISO 9001, ISO14001, EN 13891 and EN 13394.
Made of 100% of recycled PET

Produced in Netherlands

Product description	Product designation:		Tenax 2220 (19*0,89)	
	Item code:		670273	
	Material type:		Polyester	
	Production technology:		Strand	
	Surface:		Flat	
	Colour:		Green	

Strap properties		Minimum	Nominal	Maximum
	Width (mm):	18.4	19	19.6
	Thickness (mm):	0.84	0.89	0.94
	Elongation (%):	10		15
	Break Strength (daN):	675	750	

Coils details	Coil Type:	standard
	Coil Inside Diameter (mm):	408
	Coil Outside Diameter (mm):	610
	Coil Width (mm):	153
	Net Coil Weight (kg):	24.684
	Meters per coil:	1100

Pallet details	Package Dimensions (LxWxH):	1200 x 1200 x 1100
	Number of Coils per Pallet:	24
	Approx. Gross Weight per Pallet (kg):	646

Date of issue: 19/02/2020

Figure 23a

Technical Data Sheet BXT3-19

SIGNODE
TRANSIT PACKAGING SOLUTIONS

Strapping tool	BXT3-19
Operation mode	auto / semi / manual
Tension force range Standard	1300 – 4500N (290 – 1000 lbf)
Soft	400 – 1600 (90 – 340 lbf)
Variable tension speed range	0 – 120 mm/s (4,7 in/s)
Weight (incl. battery)	4,3 kg (9,5 lb)
Dimensions (L x W x H)	370 x 143 x 135 mm
	15.5" x 5.6" x 5.3"
Working temperature	-10°C to +40°C (14-104 °F)
Relative humidity	up to 90%

Battery / Charger	
Charger type	Bosch
Battery charger voltage	100 or 110 or 230 V
Charging time	25-35 min.
Battery type	Bosch Li-ion 18V, 4.0 Ah
Cycles per battery charge	
- Low tension	800
- Medium tension	500
- High tension	300

Strap	
Strap	PET (Polyester)
	PP (Polypropylene)
Width	15-16, 18-19 mm (5/8", 3/4")
Thickness	0,8-1,3 mm (.031"-0.51")

Features	
Real time indication of applied tension force	√
Variable tension speed	√
Favorite strapping function	√
Display color indication for tool status information	√
Strap alignment indication	√
Strap dust blow out vent	√
Battery protection	√
0-Tension welding	√

Figure 23b

4.4.2 Cordstrap

The Cordstrap supplies required to meet the above certifications are:

- Cordstrap CC65 & CB6S (Figure 24)

Specifications Cordstrap Composite Strapping Solution: CC65 & CB6

Performance Specifications	
Performance System (strap & buckle)	
System Breaking Strength*	900 daN / 2025 lbf
Performance Strap	
Linear Breaking Strength*	625 daN / 1405 lbf
Elongation	<7%
Elongation at Break	11% - 17%
Certification	German Lloyd

Strap Specifications	
Dimensions	
Width*	19mm / 3/4"
Thickness*	0,97 mm / 1/32"
Material	High tenacity polyester filament yarn and Homopolymer Polypropylene
Coil	
Length per Coil**	500 m / 1640 ft
Core Diameter	200 mm / 8"
Packaging	
Carton Box	2 coils per box
Dimensions*	390 x 390 x 354 mm / 15.3/8" x 15.3/8" x 14"
Box Weight*	20 kg / 44 lbs
Product Code	7266000
Pallet Box	30 coils per box
Dimensions*	1181 x 781 x 890 mm / 46.9" x 31.1" x 35"
Box Weight*	296 kg / 653 lbs
Product Code	7266900

Buckle Specifications	
Dimensions	
Width*	19 mm / 3/4"
Material	Galvanized steel wire
Packaging	
Carton Box**	500 pieces per box
Dimensions*	266 x 166 x 272 mm / 10.1/2" x 6.5/8"x 8.5/8"
Box Weight*	9 kg / 20 lbs
Product Code	7354500

Represented in over 50 countries

World market leader — Specialist advice
ISO 9001:2008 certified — Continued product development
Manufacturer & supplier since 1965 — Training at Cordstrap Training Centers
Offering genuine customer solutions — Quality assurance

Figure 24 - page 1

Recommended Tensioner(s)	
Manual Tensioner	CT25
Applied Pre-tension	50 – 550 daN / 110 – 1235 lbf
Suitable for strap widths	13 mm - 25 mm / 1/2" - 1"
Suitable for strap thicknesses	0,8 - 1,2 mm / 1/32"- 3/64"
Weight*	1,3 kg / 2.9 lbs
Product Code	7514000
Manual Tensioner	CTT25
Applied Pre-tension	50 – 550 daN / 110 – 1235 lbf
Suitable for strap widths	13 mm - 25 mm / 1/2" - 1"
Suitable for strap thicknesses	0,8 - 1,2 mm / 1/32"- 3/64"
Weight*	1,4 kg / 3.1 lbs
Product Code	7514600

Accessories	
Coil Dispenser with Buckle Tray	
Product Code Portable Version	7538000
Product Code Static Version	7544000
Edge Protection	Different types and sizes available. Your Cordstrap cargo securing specialist can advise you about the best Edge Protection for your application.
Pallet Needle	
Product Code	7551000

*Tolerance of +/- 10%
**Tolerance of +/- 2%

We recommend storing all Cordstrap Products in a cool a dry environment out of direct sunlight and between 5°C and 25°C / 41°f and 77°f

All information provided is based on accuracy at time of creation

Represented in over 50 countries

World market leader — Specialist advice
ISO 9001:2008 certified — Continued product development
Manufacturer & supplier since 1965 — Training at Cordstrap Training Centers
Offering genuine customer solutions — Quality assurance

Figure 24 - page 2

4.5 Operating Instructions DRUMCLIP DC19B GREEN

Main steps to be taken before using the Drumclip:

•   Check the Drumclip for any damages.

•   Check the production date on the upper side of the Drumclip. The Drumclip must not be used for more than 2 years after the production date.

•   The Drumclip may be cleaned with water and soap.

•   If the Drumclip has been in contact with chemicals, it may no longer be used.

•   The Drumclip may only be used on trucks with a gross weight of 3,500 kg or more.

•   Drumclips must be stored in dry, moderately heated conditions and protected from sunlight and mechanical damage.

•   The Drumclip may not be dried or stored near fire or in places with elevated temperatures.

•   The maximum temperature at which the Drumclip can be used is -20C Degrees Celsius + 50 Degrees Celsius.

There are 2 operating instructions DRUMCLIP DC19B GREEN including a step-by-step plan.

•   Figure 25a is the operating instruction in combination with Signode Tenax T2220

•   Figure 25b is the operating instruction in combination with Cordstrap CC65 &CB6S

The operation instructions must always be followed.

Figure 25a - Page 1

Operating Instructions DC19B GREEN
for open head drums in combination with Signode

Operating Instructions DRUMCLIP DC19B GREEN
In combination with two Signode Tennax T2220 (19x0.89mm / 0,75x0,04") straps.

The DRUMCLIP DC19B GREEN is an innovative tool that makes it safer and easier to secure 200 litre / 55 gallon open head drums to a pallet and/or trailer, without the use of additional pallets or other equipment. The DC19B has been tested with a 0.8g brake delay in combination with a strap (Signode Tenax 2220). This solution is DIN EN 12195-1, ISTA 3 E Pallet Stability and EUMOS 40509 Transport Safe certified. This combination can be used for transport and pallet stabilisation of UN 200 litre / 55 gallon open head drums on pallets. For the certifications we refer to our website drumclip.nl

Important information
● Check the Drumclip before use. A damaged Drumclip may not be used again.
● Check the production date on the upperside of the Drumclip. The Drumclip must not be used for longer than 2 years after the production date.
● The Drumclip can be cleaned with water and soap.
● If the Drumclip has been in contact with chemicals, it may no longer be used.
● The Drumclip may only be used on trucks of 3.500 kg (7.716 lbs) or more.
● Drumclips must be kept in dry, moderately heated conditions and protected from sunlight and mechanical damage.
● The Drumclip may not be dried or stored near fire or in places with elevated temperatures.

Step 1
Place four drums on a wooden pallet.
Place two Drumclips opposite each other between two drums with the wide side facing outwards. Use two Signode Tenax T2220 straps. One strap is stretched horizontally in the middle of the drums. The other strap is stretched vertically across the two Drumclips and under the pallet. Both straps should be tensioned with a force of 2500 N. Do this with each pallet of drums to be transported.

When using two drums on a pallet, follow the same procedure as step 1.

DRUMCLIP | Operating Instructions DC19B GREEN for open head drums in combination with Signode   **Page 1**
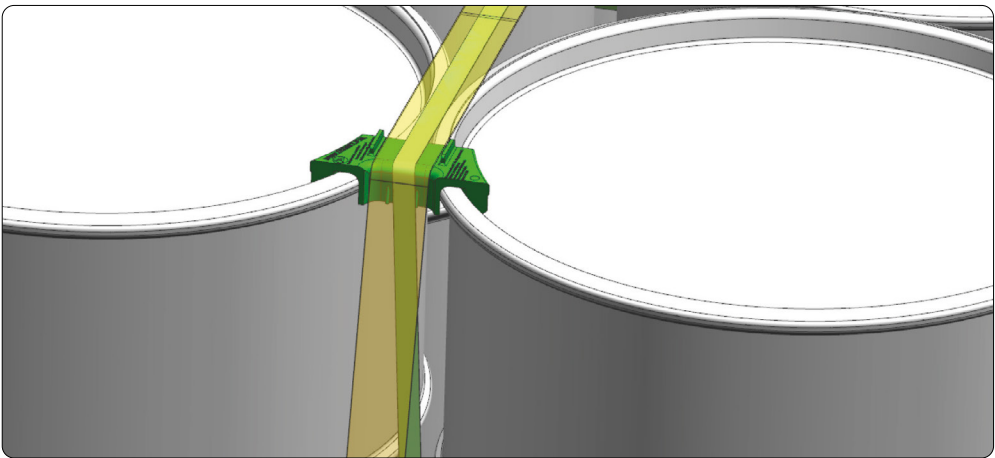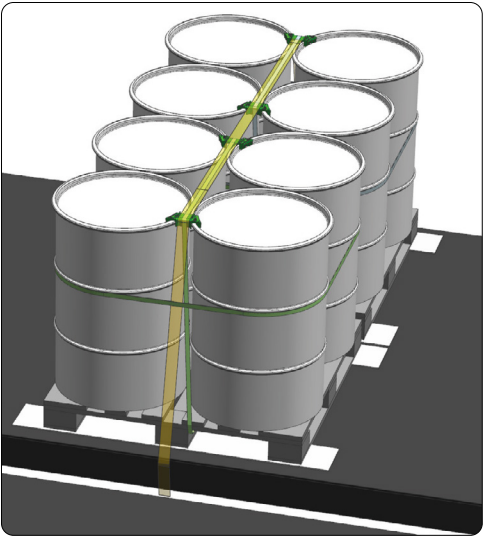
Figure 25a - Page 1

DRUM CLIP

Operating Instructions DC19B GREEN
for open head drums in combination with Signode

Step 2
Place the pallets of drums (with a forklift truck) on the trailer (in single or double rows) in such a way that the Drumclips are visible at the side of the trailer (the tension strap will be put on these later). Place the pallets on anti-slip mats that have a minimum friction resistance of 0.6u.

Step 3
Use a lashing strap with a minimum StF value of 350 DaN for a double row of drums. In this way, drums can be secured as shown in the illustration. Consult the guidelines for the lashing strap here.
Place the strap across the drums and the Drumclips, so that the strap is between the strap guides of the Drumclips.
Make sure the strap is not twisted.
The strap should be placed on both sides of the vehicle under the horizontal strap that goes around the drums.

Step 4
Then attach the strap hooks to the anchor points on the vehicle. Use an ergo ratchet and a strap (50mm/1.97" LC=2,500 daN) to secure the drum pallets to the vehicle.
Lead the strap into the ergo ratchet and hand-tension with a force of SHF daN (50 kilograms / 110 lbs).
The strap should be at a 90-degree angle to the direction of travel and attached to the vehicle in line with the Drumclips.

Figure 25a - Page 2

DRUM CLIP

Operating Instructions DC19B GREEN
for open head drums in combination with Cordstrap

Equipment
For DIN EN 121295-1 load securing, four DRUMCLIP DC19B GREEN, three Cordstrap CC65 Composite Strapping (19mm; ¾") and three CB 6S Buckle (19mm; ¾") are required.
For ISTA 3E Pallet Stability, two DRUMCLIP DC19B GREEN, two Cordstrap CC65 Composite Strapping (19mm; ¾") and two CB 6S Buckle (19mm; ¾") are required.

The DRUMCLIP DC19B GREEN is an innovative tool that makes it safer and easier to secure 200 litre / 55 gallon open head drums on a pallet and/or trailer, without the use of additional pallets or other equipment. The DC19B has been tested with a 0.8g brake delay in combination with straps (Cordstrap CC65 Composite Strapping + CB 6S Buckle). This solution is certified DIN EN 12195-1, ISTA 3 E Pallet Stability and EUMOS 40509 Transport Safe. This combination can be used for transport and pallet stabilisation of UN 200 litre / 55 gallon open head drums on pallets. For the certifications we refer to our website drumclip.nl

Important information
- Check the Drumclip before use. A damaged Drumclip may not be used again.
- Check the production date on the upperside of the Drumclip. The Drumclip must not be used for longer than 2 years after the production date.
- The Drumclip can be cleaned with water and soap.
- If the Drumclip has been in contact with chemicals, it may no longer be used.
- The Drumclip may only be used on trucks of 3.500 kg (7.716 lbs) or more.
- Drumclips must be kept in dry, moderately heated conditions and protected from sunlight and mechanical damage.
- The Drumclip may not be dried or stored near fire or in places with elevated temperatures.

Step 1 (ISTA 3 E Pallet Stability and EUMOS 40509)
Place four drums on a wooden pallet.
Place two Drumclips opposite each other on the outside of the drums with the wide side facing outwards. Each Drumclip is positioned between two drums. Use two Cordstrap CC 65 Composite Strapping and two CB 6S Buckles. One strap is stretched horizontally around

the drums. The other strap is stretched vertically across the Drumclips and under the pallet. The Buckle is used to connect the straps. Make sure that the position of the Buckle is not on the outside of the trailer or on top of the drums. For the correct positioning of the Buckle and the tension of the straps we recommend consulting Cordstrap's strapping instructions. Now the pallet is certified according to ISTA 3E Pallet Stability and EUMOS 40509. The above step should be carried out for each pallet with drums.

When using two drums on a pallet, follow the same procedure as step 1. Now the pallet is certified according to EUMOS 40509.

Figuur 25b - Pagina 1
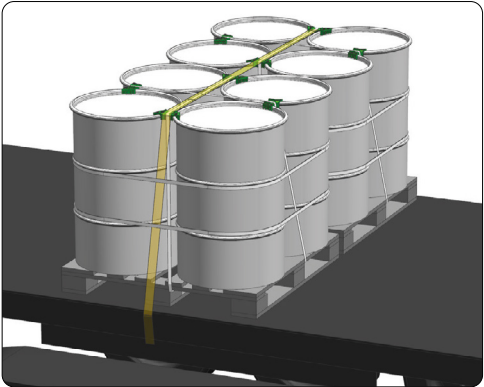
Operating Instructions DC19B GREEN
for open head drums in combination with Cordstrap
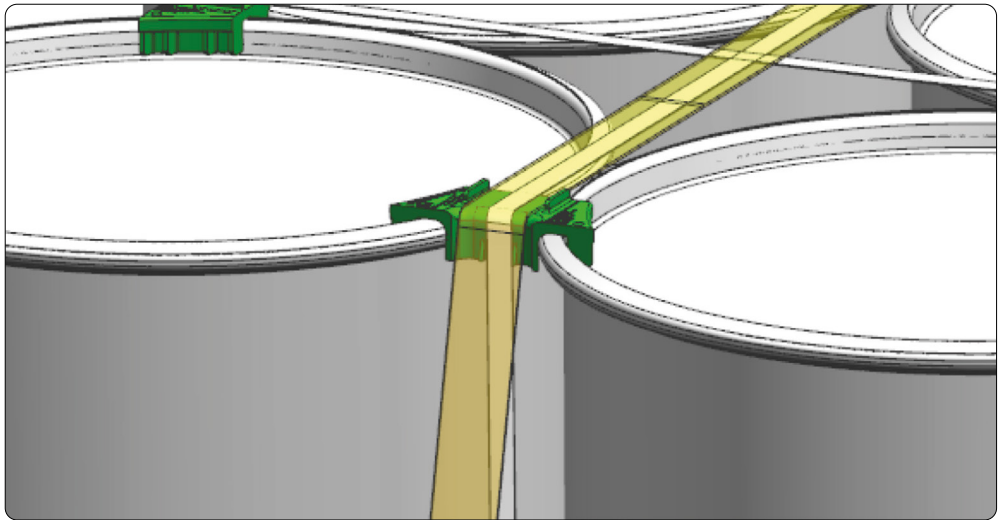
Step 2
Add two Drumclips crosswise of the ones placed in Step 1 and tighten the Cordstrap strap and buckle vertically over the Drumclips and under the pallet as described in Step 1.

Step 3
Place the pallets with drums (with the forklift truck) in the trailer (in single or double rows). Place the pallets on anti-slip mats with a minimum friction of 0.6 Mu.

Step 4
Use a lashing strap with a minimum StF value 350 DaN for a double row of drums. In this way, drums can be secured as shown in the illustration. Please refer to the guidelines of the securing strap.
Place the strap across the drums and the Drumclips, so that the strap is between the strap guides of the Drumclip. Make sure the strap is not twisted. The strap

should be placed on both sides of the vehicle under the horizontal strap that goes around the drums.

Step 5
Then attach the strap hooks to the anchor points on the vehicle. Use an ergo ratchet and a strap (50mm/1,97" LC=2,500 daN) to secure the drum pallets to the vehicle.
Feed the strap into the ergo ratchet and hand-tension with a force of SHF daN (50 kilograms / 110 lbs).
The strap should be at a 90-degree angle to the direction of travel and attached to the vehicle in line with the Drumclips. Now the pallet load is certified according to DIN EN 12195-1 load securing.

DRUMCLIP | Operating Instructions DC19B GREEN for open head drums in combination with Cordstrap   **Page 2**

Figuur 25b - Pagina 2

4.6   Test Reports | DRUMCLIP DC19B GREEN

The complete test reports from the authorities listed below can be found on our website.
By scanning the QR code, you will immediately be taken to the correct drumclip.nl website page.
The URL where you can find the test reports is: https://drumclip.nl/how-to-use/

The test reports for the DRUMCLIP DC19B GREEN are issued by the following authorities:
- TÜV Rheinland Group
- IPS Technology | ISTA Certified Testing Laboratory
- CS-TS | EUMOS Certified Testing Laboratory

5. Plastic drums

Plastic drums can be recognised by their closed top with two lockable openings (See Figure 26). DRUMCLIP DC19B GREEN can be used to create pallet stability for these drums. DRUMCLIP DC19B GREEN can be used for pallet stability and transport safety.

Figure 26: Plastic drum

5.1 DRUMCLIP DC19B GREEN

The DRUMCLIP DC19B GREEN is a plastic tool that can be used to secure plastic drums to the pallet. This Drumclip is primarily designed for Openhead UN 200 litre drums (see Chapter 4). The DRUMCLIP DC19B GREEN in combination with plastic drums, is ISTA 3E Pallet Stability and EUMOS 40509 Transport Safe certified.
Figure 27, 28 and 29 below show the application of DRUMCLIP DC19B GREEN on a plastic drum.

Figure 27: DRUMCLIP DC19B GREEN secured with Signode Tenax T2220 Polyester strap

Figure 28: DRUMCLIP DC19B GREEN secured with Cordstrap CC65 &CB6S strap

Figure 29: DRUMCLIP DC19B GREEN secured with Cordstrap CC65 &CB6S strap

5.2 Technical information DRUMCLIP DC19B GREEN

DRUMCLIP DC19B GREEN is made of a glass-fibre reinforced plastic base material mixed with a green dye. The ambient temperature at which the Drumclip may be used lies between -20°C and + 50°C. The technical specifications are given in Figures 30a and 30b. Each Drumclip can be identified by the text:

    Geba Innovations BV

    Chr. Huygenstraat 3

    3261 LR Oud-Beijerland

    Produced in The Netherlands

    Product: DRUMCLIP B

    Art. No.: DC19B

Each Drumclip has a unique article number that can be found below the text. The Drumclip can be used for a maximum of two years after production. Therefore, there is a production date on every Drumclip. The Drumclip is certified for 2 years after the production date. Once these 2 years have passed, the Drumclip can no longer be used. The date stamp is shown in the following location in Figure 31.
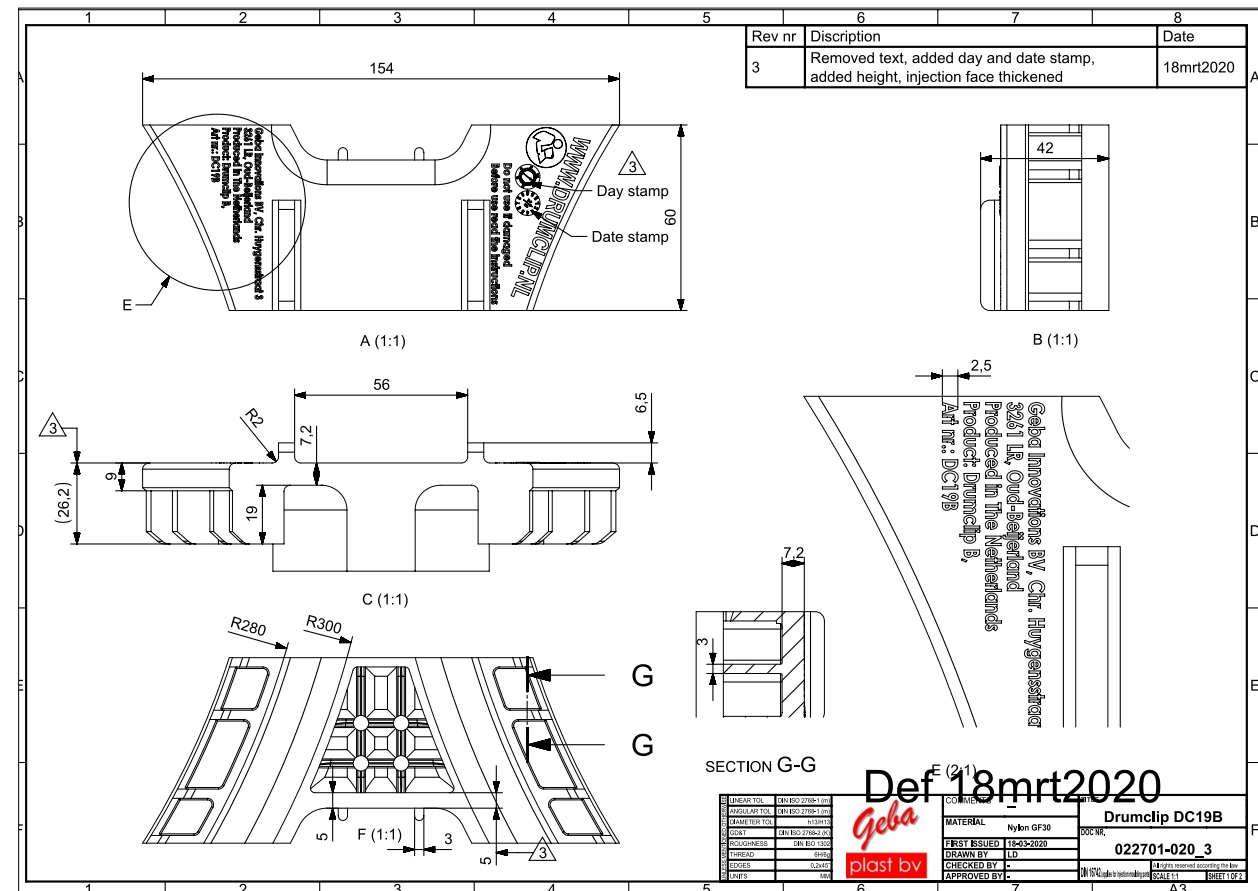
Figure 30a: 2D drawing DRUMCLIP DC19B GREEN

Figure 30b: Isometric view DRUMCLIP DC19B GREEN
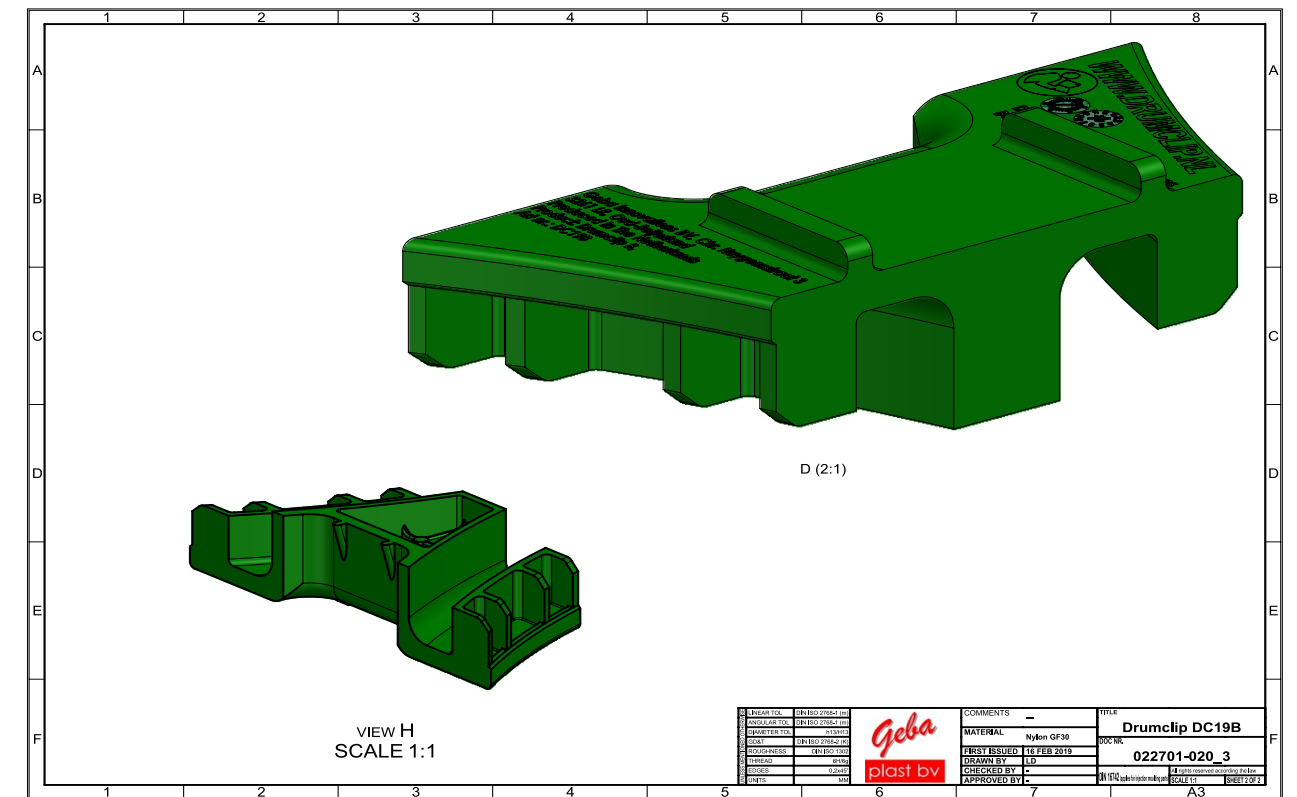

Left arrow is at 4: 4th day of the month. Right arrow is at 2: 2nd month of the year, February. The number through which the arrow passes is 20: represents the year.
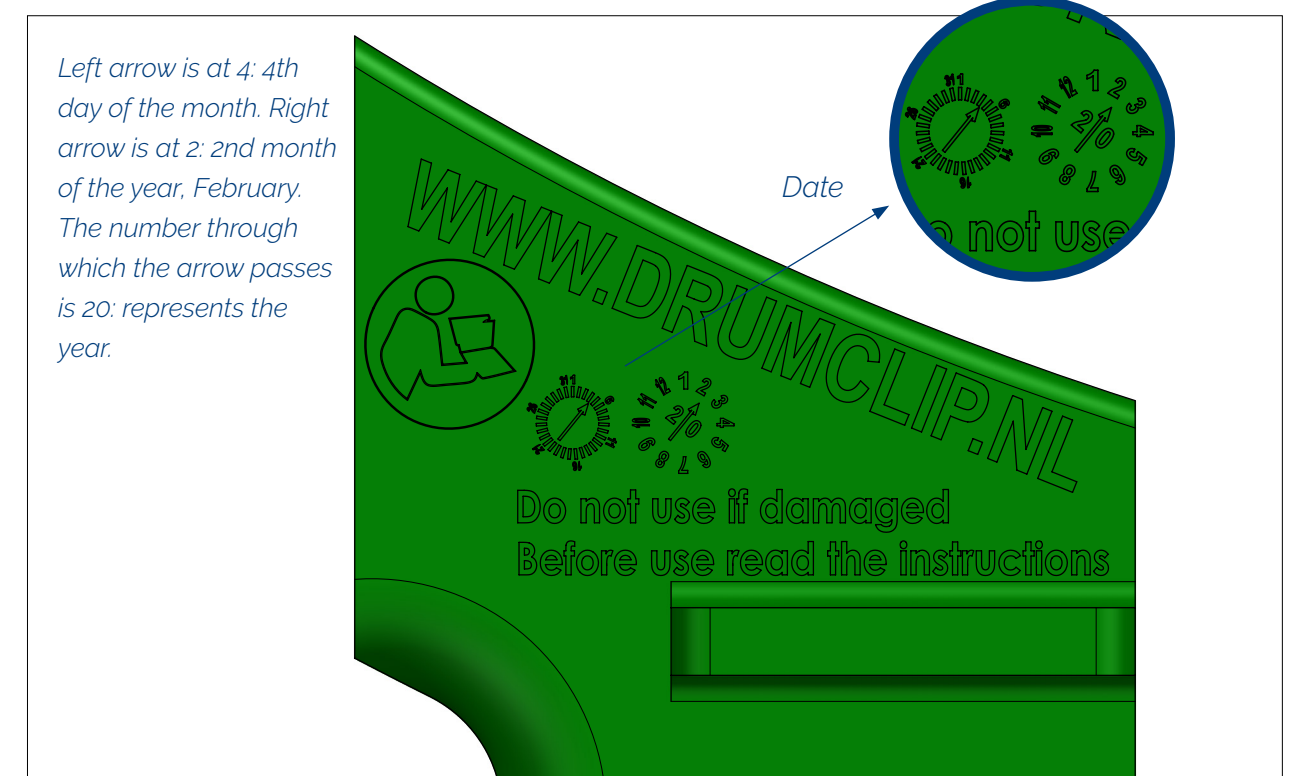
Date

Figure 31: Stamp production date DC19B GREEN

5.3 Certification DRUMCLIP DC19B GREEN

5.3.1 ISTA 3E Pallet Stability

The Drumclip is certified for pallet stability according to ISTA 3E Pallet Stability. According to these certifications, the right pallet stability can be created in combination with the right strap and Drumclip. Either Signode or Cordstrap can be chosen.

The link to the test reports can be found in Chapter 5.6 Test Reports | DRUMCLIP DC19B GREEN.

ISTA 3E Pallet Stability	Signode	(Figure 32a)
Item	Description	Specifications
Pallet type	CP-9	Chemicals Pallet,1140x1140x156mm.
Drums	Plastic	4 Plastic Drums
Straps	Signode Tenax 2220	Polyester | width: 19mm, thickness: 0.89mm | 1x horizontal, 1x vertical (2 in total)
Machine setting	Signode BXT3-19	2500 N
Type of Drumclip	DC19B	4 Pieces
Anti-slip mats	3 pieces	Minimum resistance value of 0,6μ

ISTA 3E Pallet Stability	Cordstrap	(Figure 32b)
Item	Description	Specifications
Pallet type	CP-9	Chemicals Pallet,1140x1140x156mm.
Drums	Plastic	4 Plastic Drums
Straps	Cordstrap CC65	Polyester | width: 19mm, thickness: 0.97mm | 1x horizontal, 1x vertical (2 in total)
Buckle	CB6S	Galvanised steel (2 pieces)
Machine setting	CT25	See specifications Cordstrap Figure 34
Type of Drumclip	DC19B	4 Pieces
Anti-slip mats	3 pieces	Minimum resistance value of 0,6μ

Figure 32a

Figure 32b

5.3.2 EUMOS 40509 Transport Safe

The Drumclip is certified for pallet stability and transport according to EUMOS 40509 Transport Safe for both 2 and 4 drums on a pallet. According to these certifications, the right pallet stability can be created in combination with the right strap and Drumclip. Signode is compatible for both 2 and 4 drums. Cordstrap is only compatible for 4 drums.

The link to the test report can be found in Chapter 5.6 Test Reports | DRUMCLIP DC19B GREEN.

EUMOS 40509 Transport Safe	Signode	(Figure 32a + 32c)
Item	Description	Specifications
Pallet type	CP-9 (4 drums)	4 drums: 1140x1140x156mm
	Custom Pallet (2 drums)	2 drums: 600x1140x156mm
Drums	Plastic	2 or 4 pieces
Straps	Signode Tenax 2220	Polyester | width: 19mm, thickness: 0.89mm | 1x horizontal, 1x vertical (2 in total)
Machine setting	Signode BXT3-19	2500 N
Type of Drumclip	DC19B	2 pieces for 2 drums or 4 pieces for 4 drums
Anti-slip mats	3 pieces	Minimum resistance value of 0,6μ

EUMOS 40509 Transport Safe	Cordstrap	(Figure 32b)
Item	Description	Specifications
Pallet type	CP-9	Chemicals Pallet,1140x1140x156mm.
Drums	Plastic	4 Plastic Drums
Straps	Cordstrap CC65	Polyester | width: 19mm, thickness: 0.97mm | 1x horizontal, 1x vertical (2 in total)
Buckle	CB6S	Galvanised steel (2 pieces)
Machine setting	CT25	See specifications Cordstrap Figure 34
Type of Drumclip	DC19B	4 Pieces
Anti-slip mats	3 pieces	Minimum resistance value of 0,6μ

Figure 32c: Showing 2 drums on a pallet

5.4 Requirements DRUMCLIP DC19B GREEN

The certificating ISTA 3 E Pallet Stability and EUMOS 40509 Transport Safe of the DRUMCLIP DC19B GREEN was obtained in combination with supplies from both Signode and Cordstrap. See also Chapter 2.

5.4.1   Signode

Signode's requirements for compliance with ISTA 3 E pallet stability certification are:

-   Signode Tenax T2220 Polyester straps (Figure 33a)
-   Signode BXT3 – 19 strapping machine (Figure 33b)

HSIGNODE®

Tenax 2220 (19*0,89)

PRODUCT DATA SHEET

This is to certify that the product supplied by us is manufactured according to quality procedures in compliance with ISO 9001, ISO14001, EN 13891 and EN 13394.
Made of 100% of recycled PET

Produced in Netherlands

Product description	Product designation:		Tenax 2220 (19*0,89)	
	Item code:		670273	
	Material type:		Polyester	
	Production technology:		Strand	
	Surface:		Flat	
	Colour:		Green	

Strap properties		Minimum	Nominal	Maximum
	Width (mm):	18.4	19	19.6
	Thickness (mm):	0.84	0.89	0.94
	Elongation (%):	10		15
	Break Strength (daN):	675	750	

Coils details	Coil Type:		standard	
	Coil Inside Diameter (mm):		408	
	Coil Outside Diameter (mm):		610	
	Coil Width (mm):		153	
	Net Coil Weight (kg):		24.684	
	Meters per coil:		1100	

Pallet details	Package Dimensions (LxWxH):		1200 x 1200 x 1100	
	Number of Coils per Pallet:		24	
	Approx. Gross Weight per Pallet (kg):		646	

Date of issue: 19/02/2020

Figure 33a

Technical Data Sheet BXT3-19

Strapping tool	BXT3-19
Operation mode	auto / semi / manual
Tension force range Standard	1300 – 4500N (290 – 1000 lbf)
Soft	400 – 1600 (90 – 340 lbf)
Variable tension speed range	0 – 120 mm/s (4,7 in/s)
Weight (incl. battery)	4,3 kg (9,5 lb)
Dimensions (L x W x H)	370 x 143 x 135 mm
	15.5" x 5.6" x 5.3"
Working temperature	-10ºC to +40ºC (14-104 ºF)
Relative humidity	up to 90%

Battery / Charger	
Charger type	Bosch
Battery charger voltage	100 or 110 or 230 V
Charging time	25-35 min.
Battery type	Bosch Li-ion 18V, 4.0 Ah
Cycles per battery charge	
- Low tension	800
- Medium tension	500
- High tension	300

Strap	
Strap	PET (Polyester)
	PP (Polypropylene)
Width	15-16, 18-19 mm (5/8", 3/4")
Thickness	0,8-1,3 mm (.031"-0.51")

Features	
Real time indication of applied tension force	√
Variable tension speed	√
Favorite strapping function	√
Display color indication for tool status information	√
Strap alignment indication	√
Strap dust blow out vent	√
Battery protection	√
0-Tension welding	√

Figure 33b

5.4.2 Cordstrap

Cordstrap's requirements for meeting the above certifications are:

- Cordstrap CC65 & CB6S (see Figure 34)

Specifications Cordstrap Composite Strapping Solution: CC65 & CB6

Performance Specifications	
Performance System (strap & buckle) System Breaking Strength*	900 daN / 2025 lbf
Performance Strap Linear Breaking Strength*	625 daN / 1405 lbf
Elongation	<7%
Elongation at Break	11% - 17%
Certification	German Lloyd

Strap Specifications	
Dimensions Width*	19mm / 3/4"
Thickness*	0,97 mm / 1/32"
Material	High tenacity polyester filament yarn and Homopolymer Polypropylene
Coil Length per Coil**	500 m / 1640 ft
Core Diameter	200 mm / 8"
Packaging **Carton Box** Dimensions*	2 coils per box 390 x 390 x 354 mm / 15.3/8" x 15.3/8" x 14"
Box Weight*	20 kg / 44 lbs
Product Code	7266000
Pallet Box Dimensions*	30 coils per box 1181 x 781 x 890 mm / 46.9" x 31.1" x 35"
Box Weight*	296 kg / 653 lbs
Product Code	7266900

Buckle Specifications	
Dimensions Width*	19 mm / 3/4"
Material	Galvanized steel wire
Packaging **Carton Box**** Dimensions*	500 pieces per box 266 x 166 x 272 mm / 10.1/2" x 6.5/8"x 8.5/8"
Box Weight*	9 kg / 20 lbs
Product Code	7354500

Represented in over 50 countries

World market leader
ISO 9001:2008 certified
Manufacturer & supplier since 1965
Offering genuine customer solutions

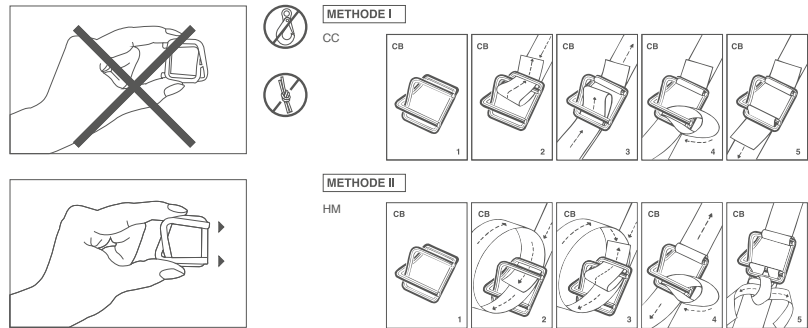Specialist advice
Continued product development
Training at Cordstrap Training Centers
Quality assurance

Figure 34 - Page 1

Recommended Tensioner(s)	
Manual Tensioner Applied Pre-tension	CT25 50 – 550 daN / 110 – 1235 lbf
Suitable for strap widths	13 mm - 25 mm / 1/2" - 1"
Suitable for strap thicknesses	0,8 - 1,2 mm / 1/32"- 3/64"
Weight*	1,3 kg / 2.9 lbs
Product Code	7514000
Manual Tensioner Applied Pre-tension	CTT25 50 – 550 daN / 110 – 1235 lbf
Suitable for strap widths	13 mm - 25 mm / 1/2" - 1"
Suitable for strap thicknesses	0,8 - 1,2 mm / 1/32"- 3/64"
Weight*	1,4 kg / 3.1 lbs
Product Code	7514600

Accessories	
Coil Dispenser with Buckle Tray Product Code Portable Version	7538000
Product Code Static Version	7544000
Edge Protection	Different types and sizes available. Your Cordstrap cargo securing specialist can advise you about the best Edge Protection for your application.
Pallet Needle Product Code	7551000

*Tolerance of +/- 10%
**Tolerance of +/- 2%

We recommend storing all Cordstrap Products in a cool a dry environment out of direct sunlight and between 5°C and 25°C / 41°f and 77°f

All information provided is based on accuracy at time of creation

Represented in over 50 countries

World market leader
ISO 9001:2008 certified
Manufacturer & supplier since 1965
Offering genuine customer solutions

Specialist advice
Continued product development
Training at Cordstrap Training Centers
Quality assurance

Figure 34 - Page 2

5.5 Operating instructions DRUMCLIP DC19B GREEN

Main steps to be taken before using the Drumclip:

- Check the Drumclip for any damages.
- Check the production date on the upper side of the Drumclip. The Drumclip must not be used for more than 2 years after the production date.
- The Drumclip may be cleaned with water and soap.
- If the Drumclip has been in contact with chemicals, it may no longer be used.
- The Drumclip may only be used on trucks with a gross weight of 3,500 kg or more.
- Drumclips must be stored in dry, moderately heated conditions and protected from sunlight and mechanical damage.
- The Drumclip may not be dried or stored near fire or in places with elevated temperatures.
- The maximum temperature at which the Drumclip can be used is -20C Degrees Celsius + 50 Degrees Celsius.

There are 2 operating instructions DRUMCLIP DC19B GREEN including a step-by-step plan.

- Figure 35a is the operating instruction in combination with Signode Tenax T2220
- Figure 35b is the operating instruction in combination with Cordstrap CC65 &CB6S

The operation instructions must always be followed.

Figuur 35 - Pagina 1

Operating Instructions DC19B GREEN
for plastic drums in combination with Signode

Operating Instructions DRUMCLIP DC19B GREEN
In combination with two Signode Tennax T2220 (19x0.89mm / 0,75x0,04") straps.

DRUMCLIP DC19B GREEN is an innovative tool that makes it safer and easier to secure 200 litre / 55 gallon plastic drums to a pallet, without the use of additional pallets or other equipment.
This solution is ISTA 3 E Pallet Stability and EUMOS 40509 Transport Safe certified. This combination is useful for pallet stabilisation of 200 litre / 55 gallon plastic drums on pallets. For the certifications we refer to our website drumclip.nl

Important information
- Check the Drumclip before use. A damaged Drumclip may not be used again.
- Check the production date on the upperside of the Drumclip. The Drumclip must not be used for longer than 2 years after the production date.
- The Drumclip can be cleaned with water and soap.
- If the Drumclip has been in contact with chemicals, it may no longer be used.
- Drumclips must be kept in dry, moderately heated conditions and protected from sunlight and mechanical damage.
- The Drumclip may not be dried or stored near fire or in places with elevated temperatures.

Step 1
Place four plastic drums on a wooden pallet.

Step 2
Place two Drumclips opposite each other between two drums with the wide side facing outwards. Use two Signode Tenax T2220 straps. One strap is stretched horizontally at the centre of the drums. The other strap is stretched vertically over the two Drumclips and under the pallet. Both straps are tensioned with a force of 2500 N. Now the pallet is safely certified according to ISTA 3E Pallet Stability and EUMOS 40509 Transport Safe. The above step should be performed for each pallet with drums.

When using two drums on a pallet, follow the same procedure as step 2.

The Drumclip is produced by Geba Innovations
Christiaan Huygensstraat 3
3261 LR Oud-Beijerland, The Netherlands
info@drumclip.nl - www.drumclip.nl

DRUMCLIP | Operating Instructions DC19B GREEN for plastic drums in combination with Signode   **Page 1**

Figuur 35 - Pagina 1

Operating Instructions DC19B GREEN
for plastic drums in combination with Cordstrap

Operating Instructions DRUMCLIP DC19B GREEN
In combination with three Cordstrap CC 65 Composite Strapping (19mm; ¾"), and three CB 6S Buckle (19mm, ¾").

The DRUMCLIP DC19B GREEN is an innovative tool that makes it safer and easier to secure 200 litre / 55 gallon plastic drums to a pallet, without the use of additional pallets or other equipment. This solution is ISTA 3 E Pallet Stability and EUMOS 40509 Transport Safe certified. This combination can be used for pallet stabilisation of 200 litre / 55 gallon plastic drums on pallets. For the certifications we refer to our website drumclip.nl

Important information
- Check the Drumclip before use. A damaged Drumclip may not be used again.
- Check the production date on the upperside of the Drumclip. The Drumclip must not be used for longer than 2 years after the production date.
- The Drumclip can be cleaned with water and soap.
- If the Drumclip has been in contact with chemicals, it may no longer be used.
- Drumclips must be kept in dry, moderately heated conditions and protected from sunlight and mechanical damage.
- The Drumclip may not be dried or stored near fire or in places with elevated temperatures.

Step 1
Place four plastic drums on a wooden pallet.

Step 2
Place four Drumclips on the outside of the drums with the wide side facing out. Each Drumclip lies between two drums. Use three Cordstrap CC 65 Composite Strapping and two CB 6S Buckles. One strap is stretched horizontally around the drums. The second strap is stretched vertically over two Drumclips that are opposite each other and under the pallet. The third strap is used to do the same with the other two Drumclips. The Buckle is used to connect the straps. Make sure that the position of the Buckle is not on the outside of the trailer or on top of the drums. For the correct positioning of the Buckle and the tension

of the straps we recommend consulting Cordstrap's strapping instructions. Now the pallet is safely certified according to ISTA 3E Pallet Stability and EUMOS 40509 Transport Safe. The above step should be performed for each pallet with drums.

The Drumclip is produced by Geba Innovations
Christiaan Huygensstraat 3
3261 LR Oud-Beijerland, The Netherlands
info@drumclip.nl - www.drumclip.nl

DRUMCLIP | Operating Instructions DC19B GREEN for plastic drums in combination with Cordstrap   Page 1

Figuur 36 - Pagina 1

5.6   Test Reports | DRUMCLIP DC19B GREEN

The complete test reports from the authorities listed below can be found on our website.

By scanning the QR code, you will immediately be taken to the correct drumclip.nl website page.

The URL where you can find the test reports is: https://drumclip.nl/how-to-use/

The test reports for the DRUMCLIP DC19B GREEN for Plastic Drums are issued by the following authorities:

- IPS Technology | ISTA Certified Testing Laboratory
- CS-TS | EUMOS Certified Testing Laboratory

ISO Open Head drums (UN200 litre/ 55 gallon drums) are similar than standard open head drums, whereby the diameter in the upper body part is reduced, in order to achieve the same outer diameter after the closing ring is applied. This is a major advantage by loading of drums into containers. The DRUMCLIP DC23C ORANGE has been designed for these drums

Figure 37: UN200 litre/ 55 gallon ISO open head drum

6.1 DRUMCLIP DC23C ORANGE

DRUMCLIP DC23C ORANGE is a plastic tool that should be used for ISO open head UN200 litre/ 55 gallon drums. Figures 38 and 39 below show the use of DRUMCLIP DC23C ORANGE on an ISO open head UN200 litre/ 55 gallon drum.

Figure 38: DRUMCLIP DC23C ORANGE between 2 ISO open head UN200 litre/ 55 gallon drums

Figure 39: DRUMCLIP DC23C ORANGE secured with Signode Tenax T2220 Polyester strap

6.2 Technical information DRUMCLIP DC23C ORANGE

The DRUMCLIP DC23C ORANGE is made of a glass-fibre reinforced plastic base material mixed with a orange dye. The ambient temperature at which the Drumclip may be used lies between -20°C and + 50°C. The technical specifications are shown in Figures 40a and 40b. Each Drumclip can be recognised by the text:

>   Geba Innovations BV
>   Chr. Huygenstraat 3
>   3261 LR Oud-Beijerland
>   Produced in The Netherlands
>   Product: DRUMCLIP C
>   Art. Nr: DC23C

Each Drumclip has a unique article number that can be found under the text. The Drumclip can be used for a maximum of two years after production. Therefore, there is a production date on every Drumclip. The Drumclip is certified for 2 years after the production date. Once these 2 years have passed, the Drumclip may no longer be used. The date stamp is shown in the following location in Figure 41.
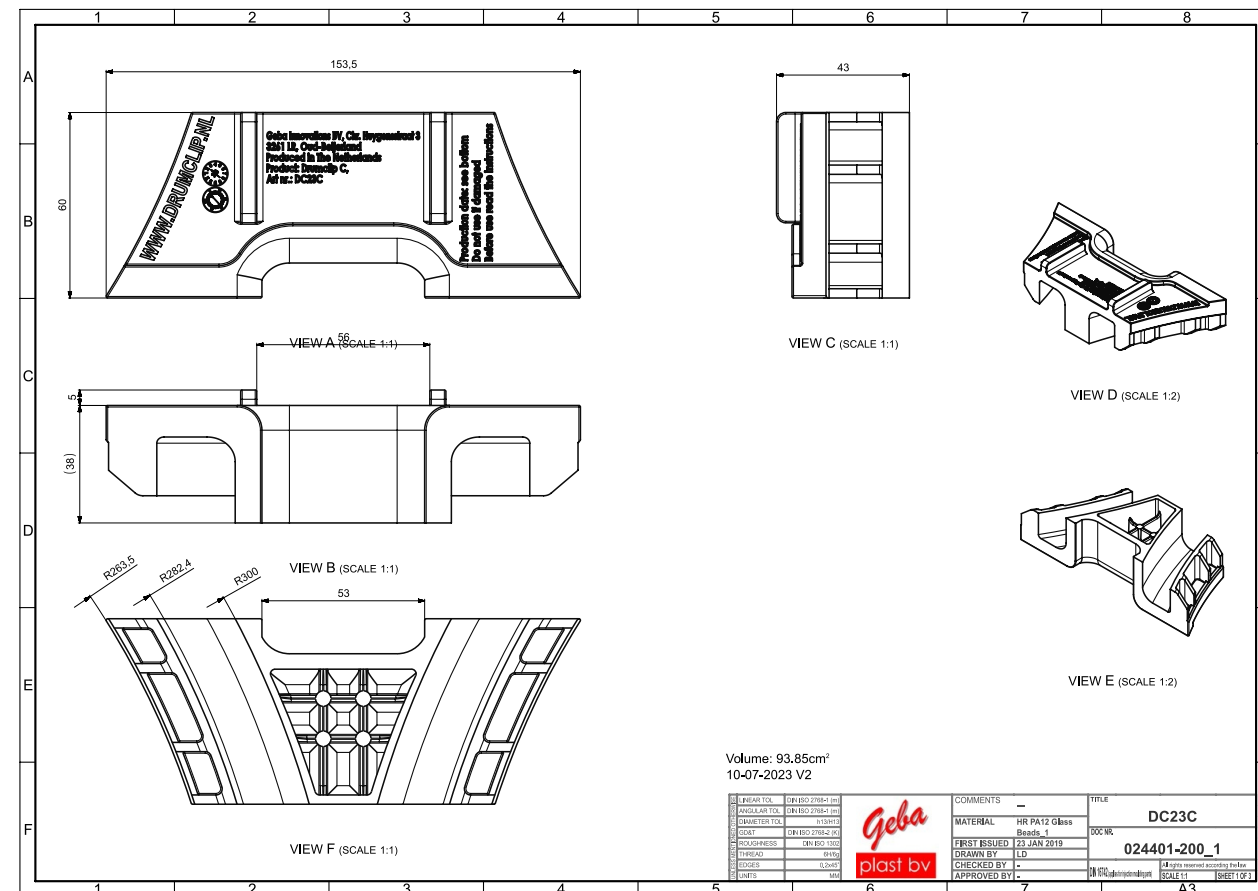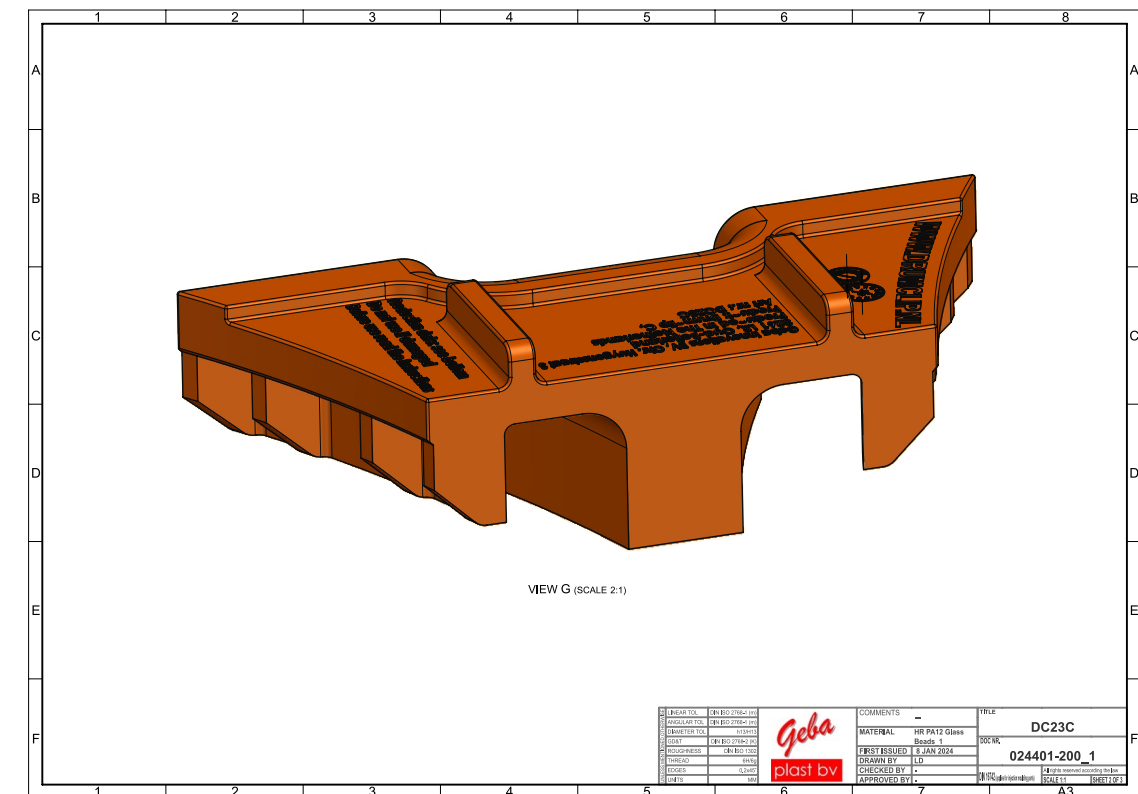

Figure 40a: 2D drawing DRUMCLIP DC23C ORANGE

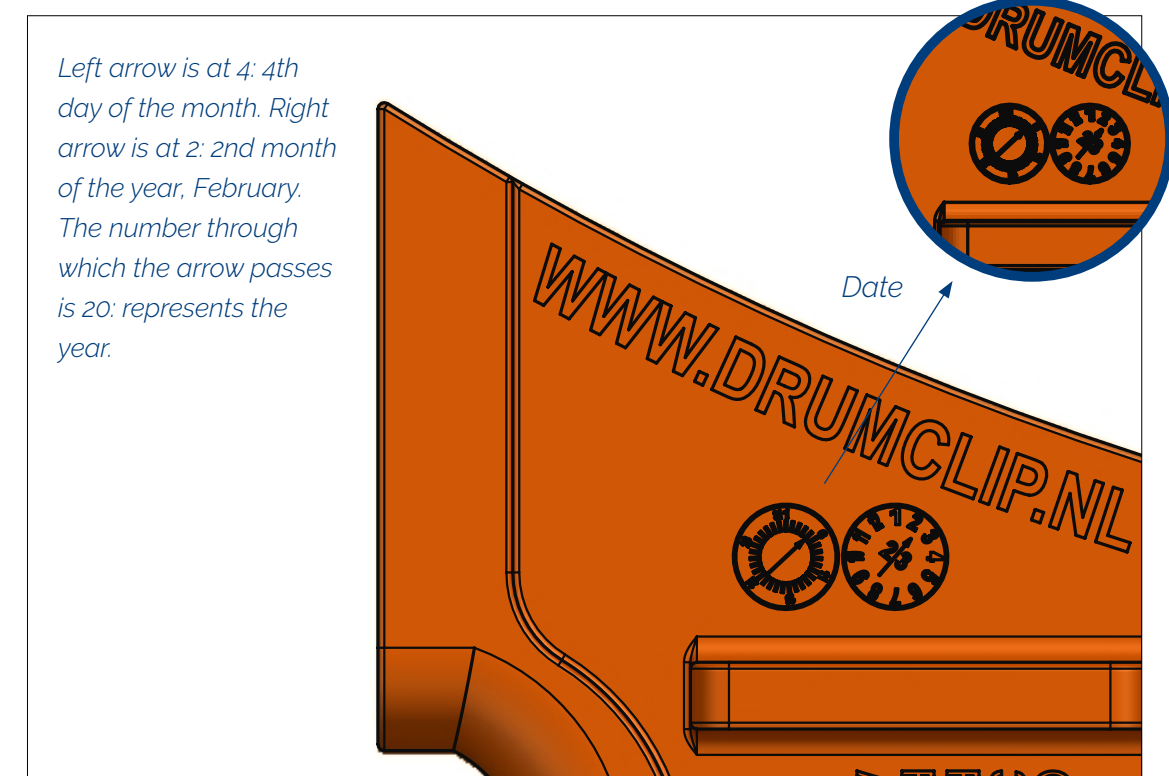*Figure 40b: Isometric view DRUMCLIP DC23C ORANGE*

Left arrow is at 4: 4th day of the month. Right arrow is at 2: 2nd month of the year, February. The number through which the arrow passes is 20: represents the year.

Date

Figure 41: Stamp production date DC23C ORANGE

6.3 Certification DRUMCLIP DC23C ORANGE

6.3.1   EUMOS 40509 Transport Safe

The Drumclip is certified for pallet stability in accordance with EUMOS 40509 Transport Safe for both 2 as 4 drums per pallet. The link to the test report can be found in Chapter 6.6 Test Reports | DRUMCLIP DC23C ORANGE.

EUMOS 40509 Transport Safe	Signode	(Figure 42)
Item	Description	Specifications
Pallet type	CP-9 (4 drums) Custom Pallet (2 drums)	4 drums: 1140x1140x156mm 2 drums: 600x1140x156mm
Drums	ISO Open head UN200/ 55 gallon	2 or 4 pieces
Straps	Signode Tenax 2220 Strapping	Polyester	width 19mm, thickness: 0,89mm	1x horizontal, 1x vertical (2 in total)
Machine setting	Signode BXT3-19	2500 N
Type of Drumclip	DC23C	2 pieces

Figure 42: Showing 2 and 4 drums on a pallet

6.4 Requirements DRUMCLIP DC23C ORANGE

The certification EUMOS 40509 Transport Safe of the DRUMCLIP DC23C ORANGE was obtained in combination with Signode supplies. See also Chapter 2 Applications.

6.4.1   Signode

Signode's requirements for meeting the above certifications are:

-   Signode Tenax T2220 Polyester straps (Figure 43a)
-   Signode BXT3 – 19 strapping machine (Figure 43b)

SIGNODE®

Tenax 2220 (19*0,89)

PRODUCT DATA SHEET

This is to certify that the product supplied by us is manufactured according to quality procedures in compliance with ISO 9001, ISO14001, EN 13891 and EN 13394.
Made of 100% of recycled PET

Produced in Netherlands

Product description	Product designation:		Tenax 2220 (19*0,89)	
	Item code:		670273	
	Material type:		Polyester	
	Production technology:		Strand	
	Surface:		Flat	
	Colour:		Green	

Strap properties		Minimum	Nominal	Maximum
	Width (mm):	18.4	19	19.6
	Thickness (mm):	0.84	0.89	0.94
	Elongation (%):	10		15
	Break Strength (daN):	675	750	

Coils details	Coil Type:	standard
	Coil Inside Diameter (mm):	408
	Coil Outside Diameter (mm):	610
	Coil Width (mm):	153
	Net Coil Weight (kg):	24.684
	Meters per coil:	1100

Pallet details	Package Dimensions (LxWxH):	1200 x 1200 x 1100
	Number of Coils per Pallet:	24
	Approx. Gross Weight per Pallet (kg):	646

Date of issue: 19/02/2020

Figure 43a

Technical Data Sheet BXT3-19

Strapping tool	BXT3-19
Operation mode	auto / semi / manual
Tension force range Standard	1300 – 4500N (290 – 1000 lbf)
Soft	400 – 1600 (90 – 340 lbf)
Variable tension speed range	0 – 120 mm/s (4,7 in/s)
Weight (incl. battery)	4,3 kg (9,5 lb)
Dimensions (L x W x H)	370 x 143 x 135 mm
	15.5" x 5.6" x 5.3"
Working temperature	-10°C to +40°C (14-104 °F)
Relative humidity	up to 90%

Battery / Charger	
Charger type	Bosch
Battery charger voltage	100 or 110 or 230 V
Charging time	25-35 min.
Battery type	Bosch Li-ion 18V, 4.0 Ah
Cycles per battery charge	
- Low tension	800
- Medium tension	500
- High tension	300

Strap	
Strap	PET (Polyester)
	PP (Polypropylene)
Width	15-16, 18-19 mm (5/8", 3/4")
Thickness	0,8-1,3 mm (.031"-0.51")

Features	
Real time indication of applied tension force	√
Variable tension speed	√
Favorite strapping function	√
Display color indication for tool status information	√
Strap alignment indication	√
Strap dust blow out vent	√
Battery protection	√
0-Tension welding	√

Figure 43b

6.5 Operating Instructions DRUMCLIP DC23C ORANGE

Main steps to be taken before using the Drumclip:

- Check the Drumclip for any damages.
- Check the production date on the upper side of the Drumclip. The Drumclip must not be used for more than 2 years after the production date.
- The Drumclip may be cleaned with water and soap.
- If the Drumclip has been in contact with chemicals, it may no longer be used.
- The Drumclip may only be used on trucks with a gross weight of 3,500 kg or more.
- Drumclips must be stored in dry, moderately heated conditions and protected from sunlight and mechanical damage.
- The Drumclip may not be dried or stored near fire or in places with elevated temperatures.
- The maximum temperature at which the Drumclip can be used is -20C Degrees Celsius + 50 Degrees Celsius.

The operation instructions must always be followed.

Figure 44

6.6 Test Reports | DC23C ORANGE

The complete test reports from the authorities listed below can be found on our website.

By scanning the QR code, you will immediately be taken to the correct drumclip.nl website page.

The URL where you can find the test reports is: https://drumclip.nl/how-to-use/

The test reports for the DRUMCLIP DC23C ORANGE are issued by the following authorities:

- CS-TS | EUMOS Certified Testing Laboratory