BRAID LOADING AND DISCHARGE SOP

LOADING

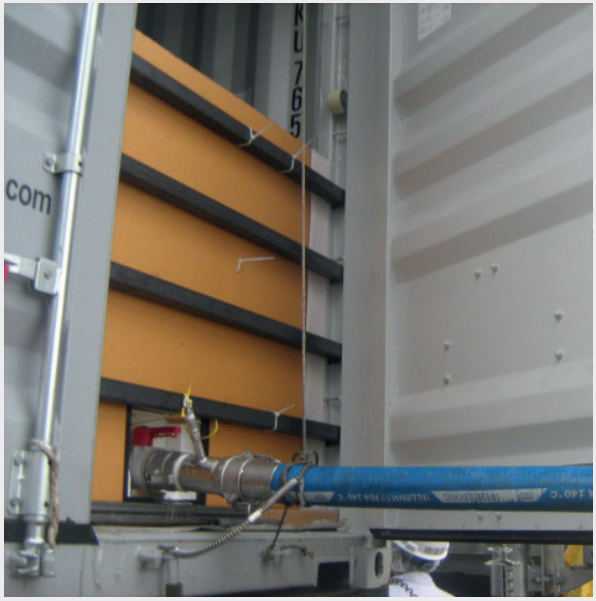
Ensure that the correct PPE is available and appropriate to the material being loaded / unloaded.

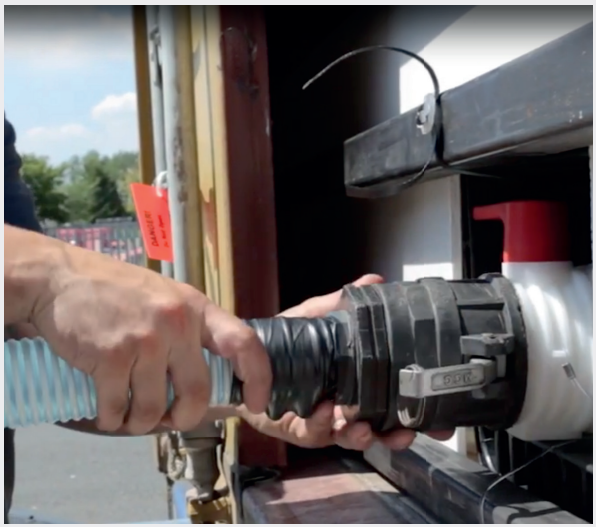
The Braid Warranty stipulates that liquid cargoes must be loaded at a temperature no greater than 60 Deg C and no lower than –10 Deg C; the latter applies also to ambient temperatures in the country of origin and destination.

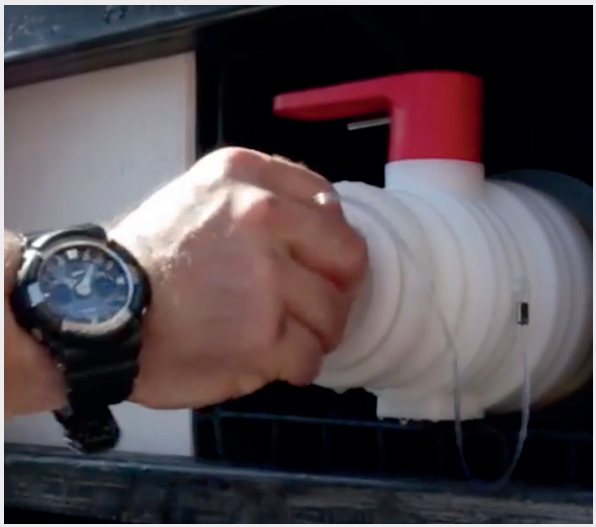
Prior to connecting the loading hose, a number of pre-loading checks should be carried out. Ensure that the container is in good condition as outlined in the container selection procedure in this manual. Ensure also that the chassis / tyres are road worthy.

- The container should be positioned on stable, level ground as close to the loading point as is reasonably practicable with the container on its chassis slightly inclined, so that the door-end of the container is **slightly higher** than the front end. This will ensure that when the loading begins, the product flows naturally forward towards the front end of the container.
- If the container is such that it is flush with the rear of the chassis, a platform should be placed behind the container doors for safe access. Some chassis have an integrated platform as part of the trailer unit making access a little easier. Opening the right hand door allows access to the valve housing assembly and at this point the fitting can be inspected, referring to page 12 of this manual. The left hand door **must** remain closed at all times.
- For bottom load tanks, engage the three-inch male cam-lock on the product line, with the female cam on the flexitank valve. Apply firm but equal pressure to the cam lever arms, thus ensuring an even connection. **The product hose must be supported such that the hose and valve are in the "horizontal."** This is to prevent un-necessary strain or downward movement on the connection and valve assembly.
- For top load tanks, engage the two-inch male cam-lock on the product line, with the female cam on the flexitank, following the same guide lines as above. Suspend the product line from a lashing ring within the container or via the door latch by means of a strap. This ensures no excess strain is placed on the flexitank discharge hose and also allows it to 'float' on top of the liquid.

- From the closed position, in which the valve handle is at a right angle to the direction of flow, the valve can be opened. There will be a distinctive and audible “click” when fully open and the valve handle will be in the same direction as the flow of product.
- Using a positive displacement pump such as a diaphragm pump or a self-priming centrifugal pump, loading can now commence. The pump can ideally be 2, 3 or 4 inch with a flow rate of up to 1000 litres per minute. During this initial period, in which the pump **will not** be running at maximum, the connections, couplings and flexitank can be observed such that any abnormalities may be noted and where necessary, acted upon. The pump can then be increased from its initial delivery rate of around 200 to 300 litres per minute, to around 800 to 900 litres per minute – depending on pump capacity – whilst continuing to observe the loading.
- When fully loaded, the valve and the pump shall be closed and switched of simultaneously. The flexitank should be convex in shape with the outer surface exhibiting a firm tension across the whole surface, indicating that the tank is fully filled. There should be no room for any fluid movement. The unique identification number will be visible on the “crown” of the flexitank.







- Care should be taken when un-coupling the delivery hose / assembly to ensure that any product left in the line, is not spilt onto the valve housing or the flexitank itself. **This is extremely important** as this may later give the impression to other persons connected with the movement of the cargo that there is a potential leak.
- **The Braid Warranty stipulates that all loaded volumes shall be within +/- 3% of nominal capacity.** This is the loaders/shippers responsibility to adhere to this rule. Under loading should be avoided. Pump delivery and metering systems ensure that nominal loaded volumes are accurately achieved. It is the responsibility of the users to ensure that measuring equipment is calibrated.

On occasion Braid personnel or their agents may be called to site after loading and before shipment. This may or may not have been brought about by the journey from point of loading to port. Should there be any signs of irregular movement in the cargo, particularly if there is any evidence of "bulging," (≥ 40mm deformation) then the cargo shall be transloaded.

The transloading procedure is clearly explained on pages 49 - 53 of this manual.

Markings and Identification

The Braid flexitank will be individually marked with its own unique identification number.

All warning labels are included with the flexitank. Please refer to page 36 of this instruction manual for details.

DISCHARGE

Prior to connecting the discharge hose, a number of similar checks shall be carried out to ensure the stability of the load prior to the discharge beginning. They are essentially a reversal of the loading procedure and can be summarised as follows:

- The container should be positioned on stable, level ground as close to the discharge point as is reasonably practicable with the container on its chassis slightly inclined, so that the door-end of the container is slightly lower than the front end. This will ensure that towards the end of the discharge, the product flows naturally forward towards the suction outlet of the flexitank.
- Open the right hand door – The left hand door must remain closed at all times during the discharge.
- Ensure safe and secure access to enable a fully supported connection to be made as described in the loading section of this manual.
- Engage the male connections on the connecting hoses with either the “two inch” or “three inch” female cam connections (depending on configuration) on the flexitank outlet.
- Open the valve on the flexitank outlet. This will allow product to flow to the pump inlet.
- Start the pump.
- During this initial period, when the pump will be running slowly, the connections, couplings and flexitank can be observed such that any abnormalities may be noted and where necessary, acted upon. The pump can then be increased from its initial delivery rate of around 200 to 300 litres per minute, to around 800 to 900 litres per minute – depending on pump capacity – whilst continuing to observe the discharge.
- For top discharge tanks, the product hose will require periodic adjustment as the level of fluid within the tank reduces.
- For bottom discharge tanks, the incline of the chassis, will aid the movement of the product towards the suction outlet and full discharge will be achieved.
- A copy of the Braid discharge checklist is shown overleaf.

BRAID DISCHARGE CHECKLIST

Flexitank ID Number: _____

No.	Item	Check for	OK	Not OK	Remarks
1	Container	Position the container so that there is a gentle slope from the front to the rear.			
2	Container Door	**CHECK** that the bolts & warning labels/tags on the left-hand door are still secured in place.			
3	Container Door	Open Right Hand Door only			
4	Container Door	**DO NOT OPEN THE LEFT HAND DOOR.** This must stay closed until the flexitank is empty.			
5	Hose	Remove the valve cap and connect to the receiving line hose.			
6	Valve	Open the Flexitank valve and start the pump. Continue until suction stops. At which point the tank should be empty.			
7	Cap	Replace fill/empty cap secure tightly.			
8	Metal Bulkhead	As a safety precaution the Metal bulkhead should not be removed until the tank is empty.			

☐ Flexitank FIT for discharge

Signed _____

Name _____

Date _____

FLEXITANK REMOVAL FOR DISPOSAL

Under normal circumstances, the flexitank will not be removed by the client, Braid personnel or their agents. This activity would normally be carried out by the Braid haulier or an approved contracted party. Where contracted however, Braid will actively assist in this process. The Braid flexitank is fully recyclable and where facilities exist it is preferable to break down into its component parts as indicated below.

The haulier would remove the container, complete with steel bulkhead and flexitank, from the discharge facility and return to haulage depot where the "debagging" process will take place.

The steel bulkhead can be recycled.

The flexitank, once clear of any remaining residue, can then be separated into its component parts using the following guide. The haulier can then contact the local authority services / waste management company, who will dispose of correctly as outlined below and in conjunction with local authority regulations.

The container shall be redelivered to the shipping line completely empty and in the same condition it was received. All markings shall be removed from the container after the flexitank has been removed. This is the responsibility of the shipper/receiver

HDPE

Container lining materials - Corflute Panels

LDPE

Flexitank – Polyethylene liner

Ancillary components – Steel bulkhead

PP

Valve, support housing, support plate

PP

Woven outer polypropylene

PS

Polyfoam Key

Cardboard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