

# Autotwist<sup>®</sup> Spreaders

自動旋轉貨櫃吊架



# Autotwist Spreaders

## Introduction & Application

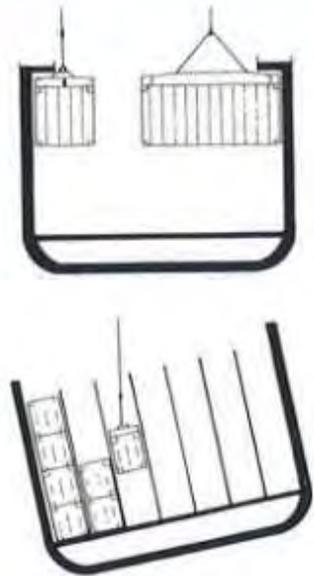
### 介紹和用法

For many years, Container Handling Equipment has been expected to fulfill all requirements of modern Stevedoring, but with the constant change in technology, this has never been possible.

However, with the introduction of the new "STINIS" Autotwist Spreader a big step forward has been achieved.

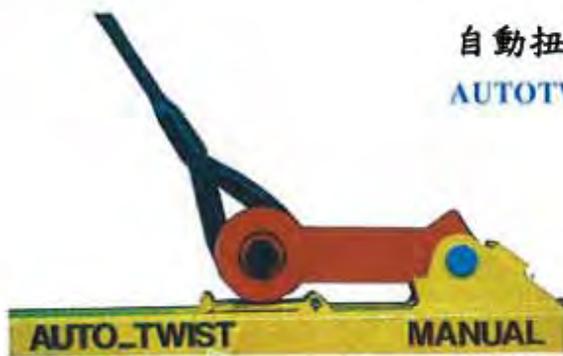
The Autotwist Spreader (SAC/A) was tested/on trial for more than 6 months on vessels of many Shipping Companies and proven extremely successful in the wide range of applications carried out. Many Shipping Companies as well as smaller ports are now placing orders for the STINIS Autotwist Spreaders.

The Autotwist Spreader is a modified version of the existing Stinis Semi-Automatic Spreader, and is unique with its Gravity Lever Locking principle. The Autotwist Spreader has been designed to be used with conventional Ship and Harbour Cranes, and is ideal as a spare Spreader for Swivel Energised Cranes.



### 自動扭轉-手動操作 AUTOTWIST-MANUAL

### Design Unique 獨特設計 Gravity Lever 重力拉桿



A-AUTOTWIST OPERATION

The Gravity lever, with its bright red colour (for easy recognition), is of the utmost importance to the Operator. By simply watching the Gravity Lever lowering onto the Beam, the operator can clearly see if the action has been correctly completed (A), or if a problem has occurred (B). A second means of checking the situation is by watching the top Handle on the Central Shaft.



B- ERROR ACTION

For security reasons, position (B) indicates that Twistlock will not rotate/actuate and therefore the Gravity Lever cannot be lowered further.



C-MANUAL OPERATION

Manual operation (C) can be achieved by preventing the Gravity Lever from lowering by means of the Autotwist-Manual Handle i.e. flipping up the manual handle. Further, using the outside Pins on the Central Shaft (either side) and on the Top Side Handle.

# Facts to Remember

## 回憶的事實

- Once you have familiarised yourself with the equipment, we can guarantee an increase in your operations work.
- The Autotwist suspension is so efficient that even ship-cells, with small hatch covers can be easily reached. Same also applies to vessel out of trim (See picture 1 and 2).
- Eccentric loaded containers will no longer cause problems with provision of a Wire Rope Extension Block.
- There is always an option to switch to hand operation.
- By utilising this system, safety is improved & time saved.
- The four Canting and Spring Flat Flippers provide the Operators with further practical benefits, and can be easily fixed in an upright position.
- Twistlocks and safety devices are easily accessible.

The Operator can always see if the Spreader is properly positioned by checking to see if the **red Gravity lever** has been lowered smoothly onto the Beam. This ensures that any error in misplacing the Spreader is easily identified.

As safety is one of the main factors in the new design of the Autotwist Spreader, included was:  
Fitting a special Spring, so that the Twistlock movement is strengthened, and this gives extra twisting power during actuation. It also ensures that the Twistlocks are kept in a fixed position when they are locked or unlocked.

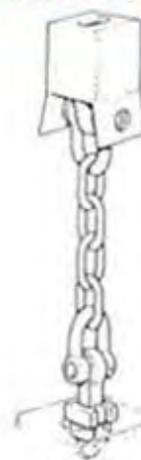
Twistlock Safety Pins are fitted on 4 corners of the Spreaders to prevent the spreader from errors by locking/unlocking rotation movement. (All four Pin have to be individually pushed up to over-ride this safety factor).

In case of an Operator error, a by-pass system which uses rebounding Pin Holders has proved very useful in solving this problem. (Please remember to switch over to manual first).

The Spreader Flippers have a permanent angle to prevent a mis-position Spreader from damaging or perforating the container roof which will hinge up and reset afterwards.

# Operation & Technical Detail

操作和詳細技術



CD-40

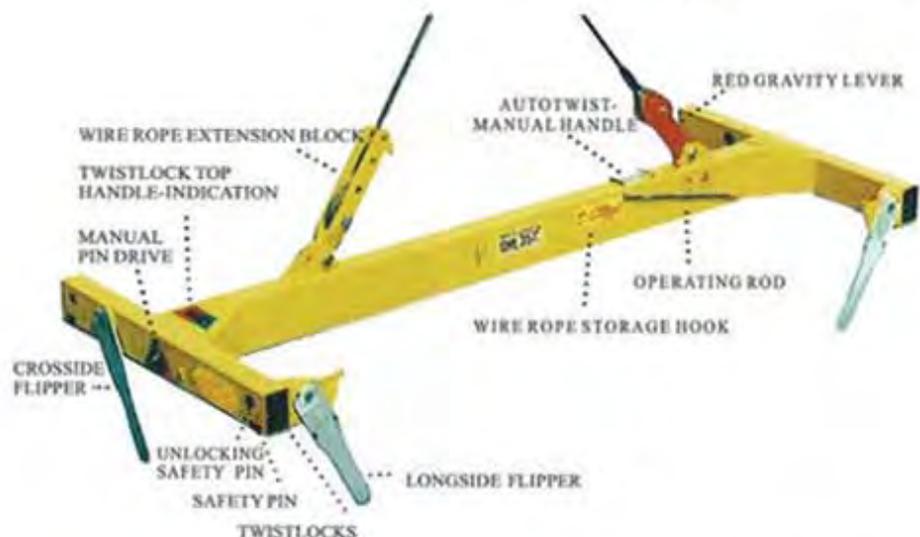
Extension chains for corner lifting with safety-lock. They can be mounted under any type of spreader. Application for damaged or too highly loaded open top containers.

## Conservation

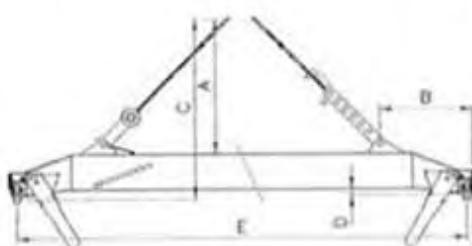
Spreader frames grit blasted to SA 2.5, epoxy primer 75 microns dft, marine paint, 125 microns dft, and our standard colour yellow RAL 1003.

## Material

twistlocks } heat treated  
bolted joints } alloy  
flippers } steel  
suspensions }  
construction } S355J2G3



## Dimensions and safe working load



SPREADER TYPE	SWL (T)	TEST LOAD ADVISED/ MAX	WEIGHT (KG)	SIZE A (mm)	SIZE B (mm)	SIZE C (mm)	SIZE D (mm)	SIZE E (°)
SAC 40-5/A/35T	35T	40T/60T	2880	5700	1205	6150	75	40
SAC 40-5/A/40T	40T	40T/67T	2680	5700	1205	6150	75	40
SAC 40-5/A/45T	45T	50T/75T	2950	5700	1205	6150	75	40
SAC 20-4/A/25T	25T	30T/45T	1470	2560	1305	3060	50	20
SAC 20-4/A/32T	32T	37T/55T	1470	2560	1305	3060	50	20
SAC 20-4/A/36T	36T	40T/60T	1500	2560	1305	3060	50	20

\* Other SWL can be offered upon request.

# 一些吊舉相片 THE LIFTING PHOTOS

LOWERING



APPROACHING



MISPLACED



CORRECTING



HOISTING



PROPER ACTION



The movements of the **red Gravity Lever**. Shown in the above photographs, clearly show the simple concept of the Autotwist Spreader, and how mistakes are prevented/impossible.

## Certificate

Upon request, we can deliver your spreader with a test certificate from the following authorities:

Inspectie van de Havenarbeid (IHA)  
Lloyd's Register of Shipping (LRS)  
Bureau Veritas (BV)  
Det Norske Veritas (DNV)  
Germanischer Lloyd (GL)  
American Bureau of Shipping (ABS)  
Ministry of Manpower (MOM)

## Repair

All moving parts are replaceable and can be readily obtained. For badly damaged units, we have a special Repair Department, who are extremely experienced in this work.

## Other products

- Fram Alloy Steel Chain and Fittings.
- Fixed and telescopic Side Spreaders.
- Fixed and telescopic fully automatic Spreaders, for toplifting.
- Wireless remote control, self-supporting Spreaders and attachments.
- Other lifting equipment.