

MON, JUN 30, 2025

SINGAPORE AIRLINES SQ

CONFIRMED

E-Ticket: | Booking Reference:

DEPARTURE

Mon, Jun 30 | 9:25am

Singapore Changi (SIN)

Terminal 2



ARRIVAL

Mon, Jun 30 | 10:10am SOEKARNO

HATTA INTL (CGK)

Terminal 3

Seat: Not specified

Class: /Coach (M)

Flight duration: 1h 45m (non-stop)

Free baggage allowance : 30KG Frequent
flyer card: Aircraft: Airbus A350-900

Meal available: Meal (Non Specific)

⚠ Please allow sufficient time for check-in and security procedures

🌿 95.62 KG CO2 for this flight

FRI, JUL 04, 2025

SINGAPORE AIRLINES SQ

CONFIRMED

E-Ticket: | Booking Reference:

DEPARTURE

Fri, Jul 04 | 11:15am

SOEKARNO HATTA INTL

(CGK)

Terminal 3



ARRIVAL

Fri, Jul 04 | 2:05pm Singapore

Changi (SIN)

Seat: Not specified

Class: /Coach (N)

Flight duration: 1h 50m (non-stop)

Free baggage allowance : 25KG Frequent
flyer card: Aircraft: Airbus A350-900

Meal available: Meal (Non Specific)

⚠ Please allow sufficient time for check-in and security procedures

🌿 95.62 KG CO2 for this flight

🌿 Carbon Emissions Estimate

Your carbon footprint for this trip is: **191.24 KG CO₂**

(Our calculation is based on 3rd party methodology)

BROMMA

A large port facility at night, illuminated by bright lights. In the foreground, a massive stack of shipping containers in various colors (blue, orange, white, and green) is visible. A yellow crane with the word "BROMMA" on its side is positioned in the middle ground. The background shows more containers and the structural elements of the port, including a large blue pillar with the number "10" and a red star logo. The overall scene conveys a sense of industrial scale and automation.

Driving Automation & Sustainability in Ports with Bromma

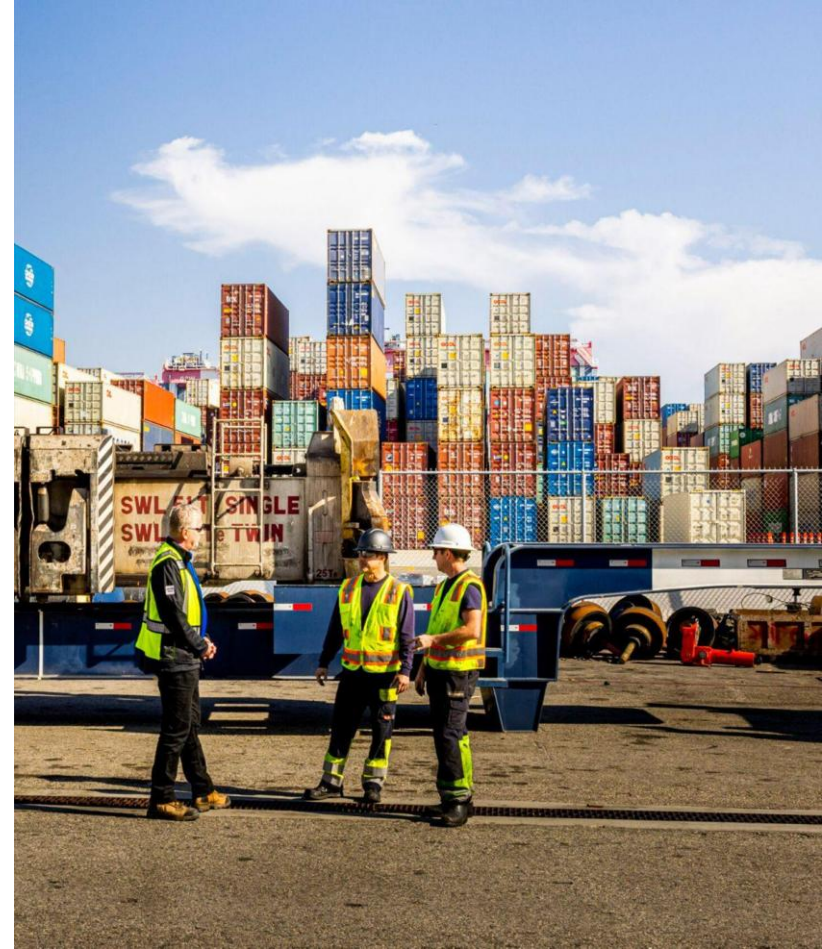


Global leader in spreader innovation

- Market leader with a proven track record - spreaders are in use in 99 out of the top 100 ports worldwide
- Quality and reliability of Broma spreaders proven through the years in service
- Committed to sustainability and innovation
- Warranty and guarantee
- Global support network
- Safety standards integrated into the spreaders design to protect operations
- Certified for quality, safety, and environmental standards

The future of terminal operations

- Electrification drives CO₂ and cost savings
- Automation and digitalisation are key enablers for smarter decisions
- Predictive maintenance reduces downtime and increases safety



Bromma solutions for equipment trends of the future

ELECTRIFICATION

Our Solution: All-electric Yard and STS spreaders and spreader upgrades

DIGITAL TRANSFORMATION

Our solution: Bromma Spreader Monitoring System

SAFETY STANDARDS

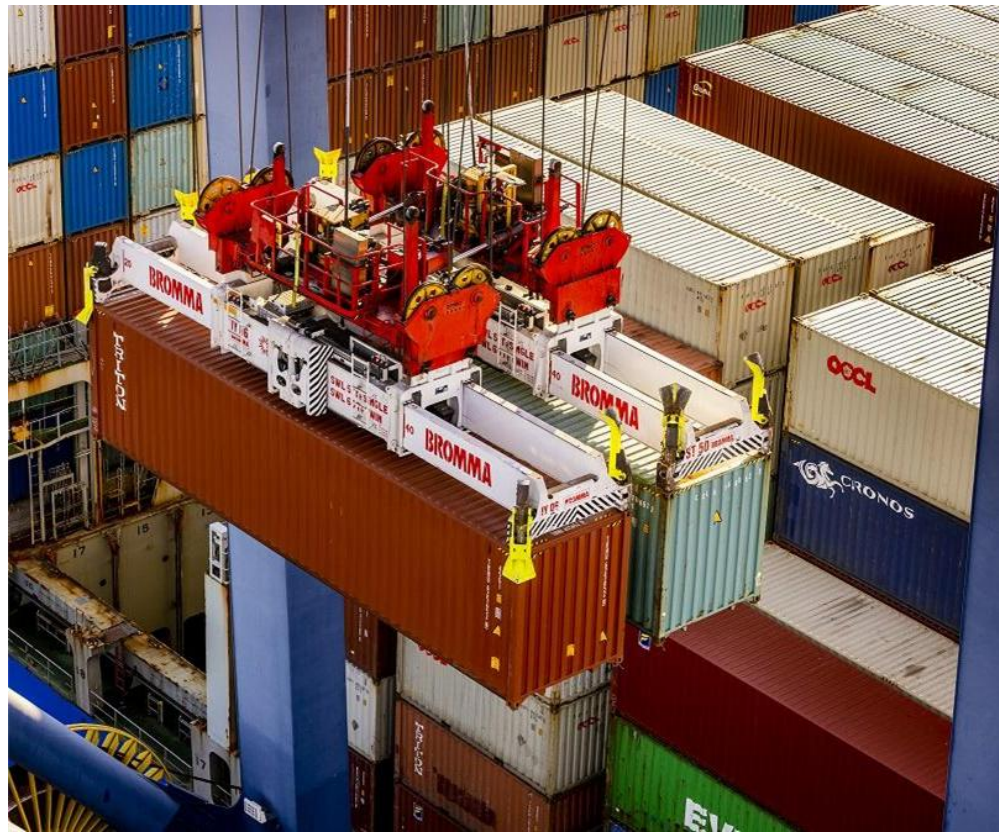
Our solution: Bromma Hawkeye and TTDS

Our innovative solutions

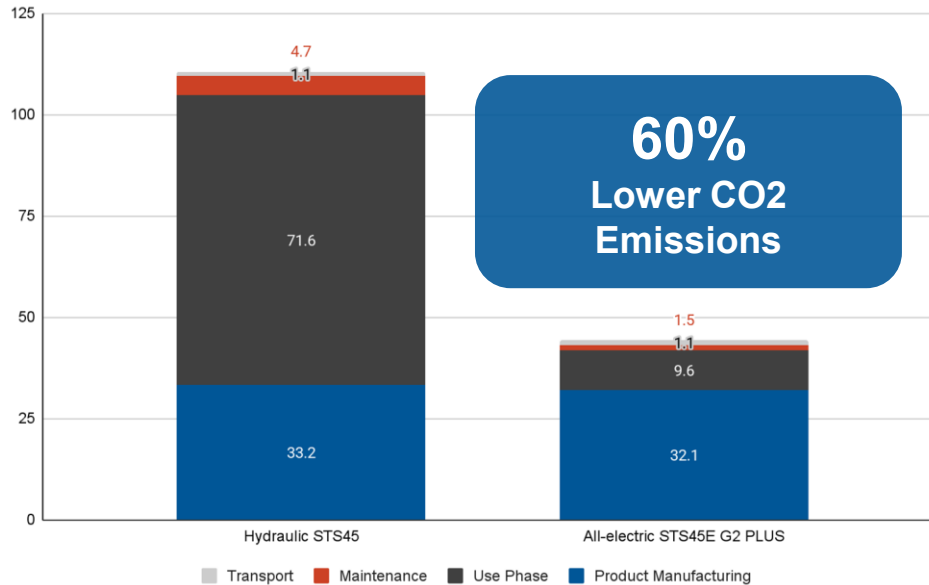
STS45E G2 PLUS

Boosting productivity while cutting costs & emissions

- **Cuts energy use by up to 90%** compared to traditional hydraulic spreaders
- **Significantly lowers CO₂ emissions** without compromising productivity
- **Reduces operating costs** with improved energy efficiency
- **Quiet operation**—silent when not in motion
- **No risk of hydraulic oil leaks**, ensuring a cleaner and safer work environment



Reducing CO2 Emissions: Insights from Lifecycle Assessment

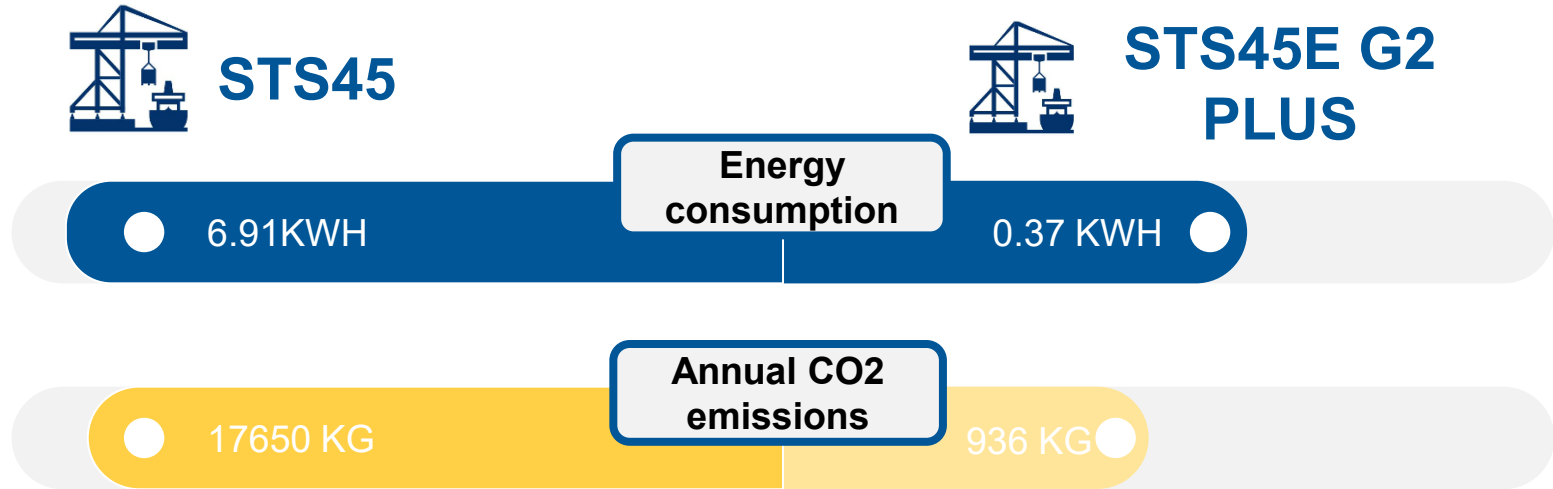


The STS45E G2 PLUS provides a more sustainable alternative to hydraulic spreaders, delivering a **60% reduction** in CO2 emissions and significantly lowering energy consumption—without sacrificing performance.

86.6% Reduction in Emissions during the use phase compared to hydraulic models.

[Full study here](#)

Over 90% reduction in Energy Use & CO₂ Emissions



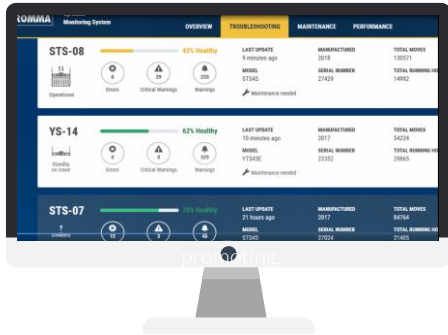
*Calculation based on assumption: 30 moves per hour. Possibility of movements in cycles: Telescoping 10%, Twin Expand 10%, Twin Expand/ Retract 10%, Flipper up/down 70%, Lock/ unlock 100%, Standby 100%

** Calculation based on assumption of 5376 working hours, in a typical ship to shore movement cycle, CO2 emission per KWH = 475 g/KWH

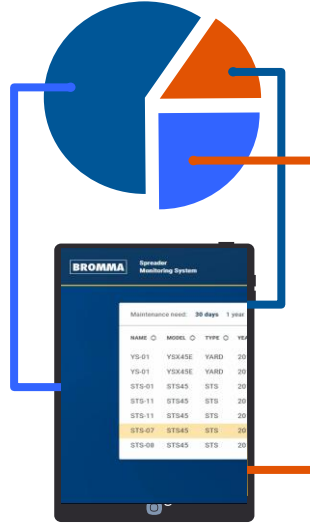
Bromma Spreader Monitoring System - A step towards predictive maintenance

BROMMA

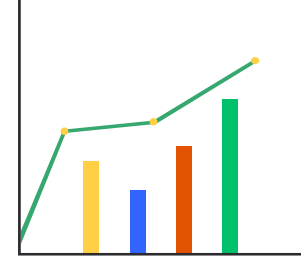
Bromma SMS is a web-based tool for real-time spreader fleet monitoring



Provides real time monitoring of spreader health and maximizes uptime



Organized maintenance planning for the spreader fleet



Key issues and solutions prioritized for quick action

Why choose Bromma SMS?



For your operations

- Improved operational efficiency and reduced costs



For your Maintenance Team

- Easier diagnostics and proactive maintenance



For your spreader fleet

- Better decision-making with data-driven insights



Bromma Hawkeye

Camera based systems



Innovation that lifts the industry

Hawkeye gives you a choice of options



Hawkeye OCR

identifies and captures each container's unique ID and prepares for integration.



Hawkeye LiveView

provides a real-time view of what happens below the spreader, including containers being handled.



Hawkeye Inspect*

records the condition of every container roof for damage before and after it has been handled.



Hawkeye TTDS*

automatically alerts your operators to any risks related to twin 20ft container lifts.

Smarter Lifting with Bromma Load Sensing System

BROMMA

ZPMC
上海振华重工

SML UNDER SPREADER
SML UNDER CARGO BEAM
65T
100T

APM TERMINALS

Bromma Load Sensing System



**High accuracy
container weighing**
Prevents overloading and
imbalanced lifts



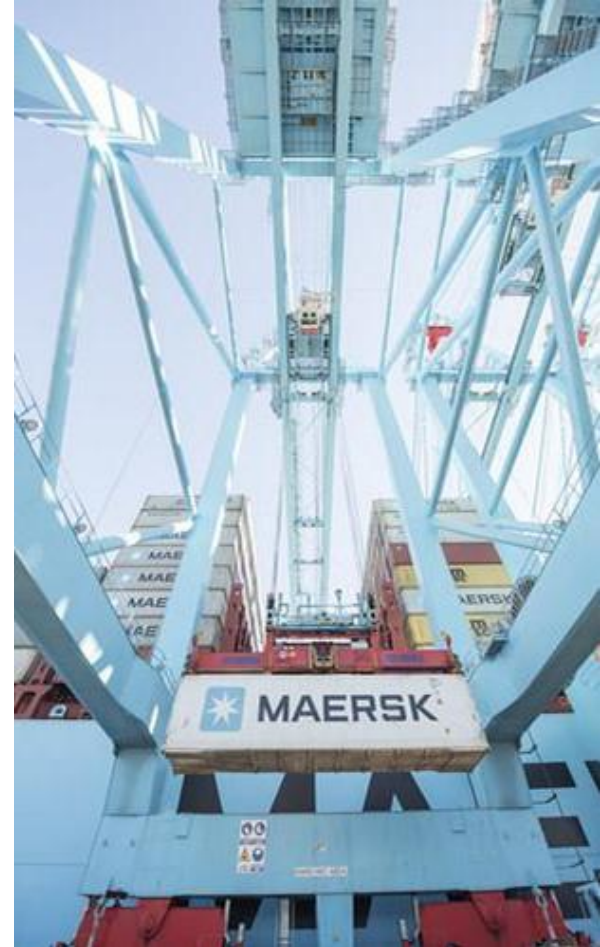
**Eccentricity
Detection**
Identifies the center of
gravity for safer handling



**High Precision
Weighing**
Weighs containers as part of
the normal lifting cycle

- **Designed for any operation** as it works even in twin-mode lifting
- **Certified for compliance:** CNIL R51 & 2014/32/EU (MID) approved
- **Temperature-Compensated Sensors** - Ensures accuracy in all condition
- **Direct Data Transmission** Sends real-time weight info to the crane PL
- **Simple Retrofit & Upgrade**

BROMMA



Any questions?

15 minutes

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BROMMA

A Tradition of Innovation