



Driving productivity through innovation

BROMMA

World leader since 1960

- Full range of spreaders and related software and services
- Ensuring reliable flow of containers on and off ships
- Supporting customers on all continents
- Largest market share in the world



Our portfolio



Ship-to-shore
spreaders



Yard crane
spreaders



Mobile harbour
crane spreaders



Mobile equipment
spreaders



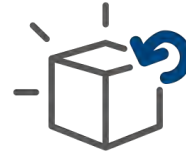
Digital
solutions



Services and
maintenance



Spare parts



Refurbishments



Upgrades



Training

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A Tradition of Innovation

A tradition of innovation

Join us on our journey of spreader technology breakthroughs
– from 1965 to 2022 and beyond.



First telescopic spreader

1967



First Smart spreader

1995



First all-electric Yard spreader

2001



First tandem spreader

2003



Predicting spreader issues with AI

2007



Load sensing system

2010



Green Zone for productivity

2011



Spreader Monitoring System

2019



All-electric STS spreader

2022

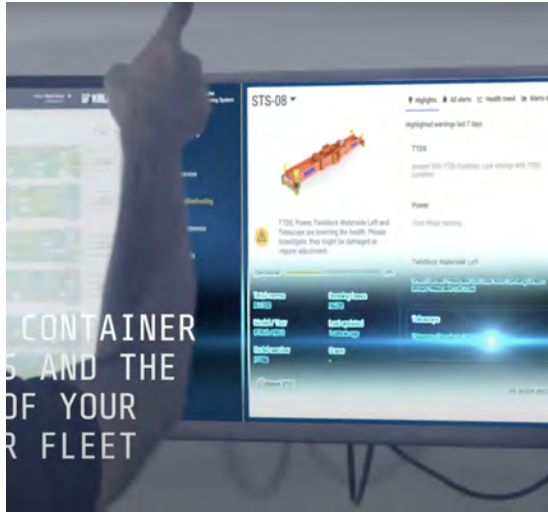
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How can innovation drive productivity at container terminals?



Bromma innovations that drive productivity



Bromma Spreader Monitoring System

A cloud and web-based system that provides an overview over the entire spreader fleet's health: real-time troubleshooting, maintenance planning and insight to operational KPI's

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All-electric STS45E G2 PLUS

No compromises on the productivity and energy consumption reduced to up to 90%



Bromma Hawkeye

Innovative camera platform that offers to monitor operations in real-time, enabling to make data-driven decisions



Case: Bromma SMS improving productivity at CSPV

CUSTOMER

CSP Iberian Valencia Terminal (CSPV) was one of the first terminals to adopt and start using Bromma's Spreader Monitoring System (SMS)

RESULTS

CSPV improved their daily routines and approach to spreader maintenance

The information provided by SMS has led to permanent productivity improvement for maintenance team

Bromma SMS today

- 45 terminals subscribed to SMS in 2022 globally
- Customers reporting improvements in spreader productivity and valuable information on spreader issues
- New features added in 2022, including map view, Spanish language support, Insights, and API integrations



Climate change is a key focus area for many of our key customers



CLIMATE CHANGE

ZERO CARBON BY 2040

By means of our ambitious decarbonization strategy, we aim to be carbon neutral as a group by 2040, with an intermediate target of 28% CO2 reduction by 2030 (with 2019 as the baseline). To this end, we are fully committed to:

1. Replacing fossil fuels or reducing their use to the minimum
2. The use of renewable or carbon-neutral energy;
3. Maximizing efficiency by investing in innovative low-emission technologies and constructing passive buildings
4. Compensation for any residual volumes as the last option (as low as reasonably possible)

The future of container terminals is electric and green



Key Environmental Focus

Waste Management	<ul style="list-style-type: none"> Hazardous Non- Hazardous Cargoes
Energy Consumption	<ul style="list-style-type: none"> Renewable Energy Non - Renewable Energy
Greenhouse Gas Emission (GHG)	<ul style="list-style-type: none"> Scope 1 (Direct Emission from Owned/Controlled resources e.g., Combustion fuel) Scope 2 (Indirect Emission from Purchased Energy) Scope 3 (Indirect Emission resulted from activities not controlled by the organisation but the organisation is impacted in its supply chain)
Water Consumption	<ul style="list-style-type: none"> Water Inflows/ Withdrawal Water Outflows/ Discharges



TAKING CLIMATE ACTION

TARGETS/COMMITMENTS

2021 PROGRESS

EMISSIONS

- | | |
|--|---|
| <ul style="list-style-type: none"> Reduce absolute Scope 1 & 2 carbon emissions by 50% by 2030, and by 75% by 2040, against a 2019 baseline year Achieve net zero carbon emissions by 2050 Establish a Scope 3 inventory by 2022 as a first step towards setting a Scope 3 emissions reduction target | <ul style="list-style-type: none"> No reduction in Scope 1 and 2 carbon emissions as a result of global industry disruptions creating inefficiencies, an expanding business portfolio and a lack of critical viable technological solutions Embarked on a Scope 3 screening in the second half of 2021 to establish our Scope 3 inventory and develop an understanding of our entire carbon footprint |
|--|---|

ENERGY

- | | |
|---|--|
| <ul style="list-style-type: none"> Aim for 90% of our Rubber Tyred Gantry Cranes (RTGs) to be electric or hybrid by 2030 | <ul style="list-style-type: none"> Reached close to 50% electrification or hybridisation for RTGs in 2021 |
|---|--|

CONTRIBUTING TO:



Environment

Commitments

We will take leadership in the decarbonisation of logistics

We will deliver on our customer commitment to decarbonise their supply chains in time and our societal commitment to act and have impact in this decade

Strategic targets

All targets are for end of year

2040:

- Net zero across the business
- 100% green solutions to customers

2030:

- Aligned with the Science Based Targets initiative 1.5°C pathway
- Industry-leading green customer offerings across the supply chain

Overview of all ESG categories

Climate change
Environment and ecosystems (incl. ship recycling)

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An aerial photograph of a dense, green forest with a winding river cutting through it. The river flows from the top left towards the bottom right, curving in an S-shape. The trees are lush and vibrant green, and the water in the river is a calm, greyish-blue. The overall scene is peaceful and natural.

Bromma Climate Commitment

Cutting down greenhouse gas emissions by 50% by 2030.

Bromma's climate ambition includes activities across the end-to-end value chain



Materials Supply

- Integration of CO2 reduction criteria in Bromma sourcing decisions
- Evaluation of fossil-free steel for inclusion in Bromma spreaders (partnership with SSAB)



Own operations

- Implementation of clean energy in the Bromma factory
- Reduce, Reuse and Recycle Program across Bromma
- Company-wide use of electric vehicles



Use of spreaders

- Boosting our all-electric offering for all crane spreader applications
- Further developing energy-efficient solutions for hydraulic spreaders

Bromma portfolio helps to decrease CO2 emissions



- All-electric STS spreader STS45E G2 PLUS



- All-electric Yard spreader YSX40E and YSX45E



- PLUS Energy Saver for hydraulic spreaders

All-electric STS45 G2 PLUS

- No compromises on the productivity
- Improved structural design
- Reduces energy consumption by up to 90%
- Saves 15 ton CO2 emissions
- Eliminates hydraulic oil spills
- Significant cost savings over spreader lifetime



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No compromises on productivity

	STS45 Hydraulic	STS45E G2 PLUS
Spreader Weight	12.7 MT	12.6 MT
Telescopic Speed		
20'-40'	25 sec	18 sec
20'-45'	30 sec	21 sec
Twin Expand/ Retract	20 sec	15 sec
Twinlift Up/ Down	8 sec	6 sec
Twistlock Rotation	1.5 sec	1 sec
Maximum Power Consumption	7.5kW	11kW
Power Source	Hydraulic	Electrical

Improving productivity with Bromma Hawkeye

Crane operator

Video feeds
Visual information(s)



Spreader control system

Video analyzed information



TOS

Container handling
process data



Bromma Hawkeye

- OCR
- Streaming



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