



BRUKS *Siwertell*

BRUKS SIWERTELL GROUP

BULK HANDLING | WOOD PROCESSING | FORESTRY TECHNOLOGY

CONTENTS

BRUKS SIWERTELL GROUP	7
STRATEGY, VALUES, PEOPLE, BRANDS	8
OUR SUSTAINABILITY APPROACH	10
THE INDUSTRIES WE SERVE	12
CUSTOMER SUPPORT	17
BULK HANDLING	19
SHIP UNLOADING	20
SHIP LOADING	22
CONVEYING, TRUCK UNLOADING	25
PORT TERMINALS	26
WOOD PROCESSING	29
CONVEYING, SCREENING	30
CHIPPING, WOOD RESIDUE PROCESSING	31
GRINDING AND MILLING	32
STORAGE AND RECLAIMING	32
FORESTRY TECHNOLOGY	35
FOREST TRAILERS, MINI FORWARDERS	38
ACCESSORIES	39
FTG MOHEDA	39
FTG MOWI	40
FTG KÄLLEFALL	41
FTG FOREST	41
FTG SPECIAL CRANES	41
LEARN MORE	42



Using your smart device's camera, you can scan the QR codes found throughout this brochure. They direct you to a specific page on our website where you can learn more about each topic.



ABOUT BRUKS SIWERTELL GROUP

Bruks Siwertell Group is a market-leading supplier of dry bulk handling, wood processing, and forestry technology. With thousands of installations worldwide, our machines handle your raw materials from forests, fields, quarries and mines, maintaining critical supply lines for manufacturers, mills, power plants and ports.

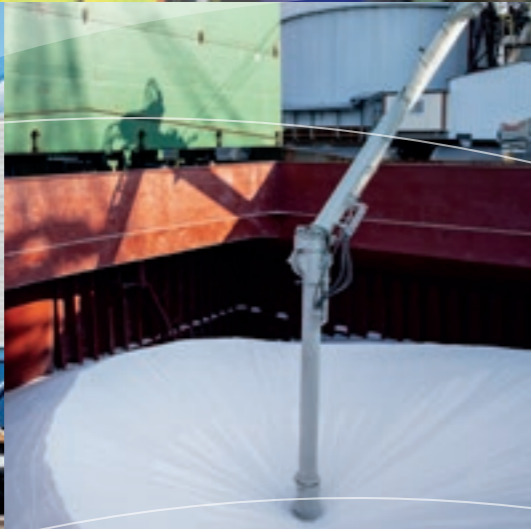
We design, produce and deliver systems for ship loading, ship unloading, conveying, storing, and stacking and reclaiming dry bulk materials, alongside equipment for chipping, screening, milling, processing, and handling for the bioenergy, biofuel, board, sawmill, pulp and paper, and forestry industries.

We are global and local. You will find our main offices in Sweden, the USA, Germany, China, the Philippines, Taiwan and Lithuania, supported by a dedicated network of hundreds of representatives and dealers worldwide.

An extensive global service team offers support to all customers whenever and wherever it is needed.



BRUKS SIWERTELL GROUP



**BULK HANDLING, WOOD PROCESSING & FORESTRY
TECHNOLOGY TAILORED FOR YOUR NEEDS**

Bruks Siwertell Group develops, designs, produces and supplies products and services that offer market-leading material handling and processing technology for the global port, wood and forestry markets.

We are pioneers in the industries that we serve. Through our commitment to understanding customer needs and industry knowledge, we are a trusted partner, delivering solutions that meet the highest demands for sustainability, efficiency, reliability and performance.

Our technology adds value to the dry bulk material handling, wood-processing and forestry sectors. It challenges traditional limits, and maximizes operational profitability and environmental protection. We were founded on innovation and ensure that this legacy continues to benefit all our customers.



TOGETHER WE CREATE SUSTAINABLE AND EFFICIENT SOLUTIONS

OUR STRATEGY



Bruks Siwertell's strategy is to build a market-leading group in dry bulk handling through the profitable growth of all our industry segments worldwide. Our development will be driven by innovation from people, products and processes.

Profitable growth will be underpinned by a strategic focus on continuously developing a customer-driven product portfolio and our absolute commitment to service. Service is key for all customers, both existing and new, and our service strategy will be developed in balance with their needs.

New digital technologies, which provide real-term benefits for customers will be pursued, along with our commitment to social, environmental and financial sustainability.

OUR VALUES

Our company values – impact, commitment, and teamwork – strongly define the way we do business, our working culture and intentions.

Impact

We aim to make a positive impact in all that we do. In line with our sustainability goals, this includes using our expertise and technology to accelerate positive global change, and ensure that our customers, personnel and owners benefit from putting their trust in us.

Commitment

We deliver quality, in our products, solutions and services, and through the collaborations that we engage in.

We keep the promises that we make, and our customers should always feel secure in our enduring accountability.

Teamwork

By working together with customers, and partners, as well as each other within the company, we achieve the best results.

Communication is key to understanding and meeting customer needs, and building a successful team. We are committed to transparency and open dialogues at every stage of each project.

OUR PEOPLE

We are headquartered in Sweden, with other main offices located in the USA, Germany, China, Taiwan, the Philippines and Lithuania. We employ about 350 people, and are also supported by a network of hundreds of representatives worldwide.

OUR PRODUCT BRANDS

Bruks Siwertell Group consists of a collection of strong, market-leading brands within the bulk handling, wood processing and forestry industries.





**CHANGE MUST START
SOMEWHERE, AND WE ARE
TAKING ACTION NOW**

SUSTAINABILITY: BEING THE DRIVE FOR POSITIVE CHANGE



Our mission is to eliminate waste, dust emissions and spillage from bulk handling, wood processing, and forestry operations, and to leverage our technology, our knowledge, and our industry influence to accelerate positive global change.

We recognize that we work in environmentally intensive industries, but our growing global population requires infrastructure, power and food. Change must start somewhere, and we believe that businesses are one of the greatest platforms to influence and drive industry transformation. Through our unique set of skills and capabilities, we want to enable our customers to adopt the most environment-friendly dry bulk handling and wood-processing operations.

Good news for the planet

Our customers need sustainable solutions, and the demand has never been greater than it is today. This is good news for the planet, and for organizations that actively promote development that is in line with these needs. We believe that through our focus on sustainability, we set an example in driving long-term industry change and, together with other industry stakeholders, support operators on their journeys towards a sustainable future.

A single word, set to change the world

Sustainability is on the world's agenda, and for good reason. Our current decade, the 'decade of action', is the most critical for making positive, sustainable change. The United Nations Environment Programme (UNEP) report warns that unless global greenhouse gas emissions fall by 7.6 percent each year between 2020 and 2030, we will miss the 1.5°C temperature target outlined in the 2015 Paris Agreement, and experience irreversible consequences such as more rapid species extinction, mass coral bleaching, sea level rises and more extreme temperatures and weather.

Our commitment to the global agenda

We are taking action now. Bruks Siwertell supports the 17 sustainable development goals (SDG) defined by the UN in the 2015 Paris Agreement, and is committed to the 'Ten principles' of the UN Global Compact. To meet the SDGs, which aim, amongst other things, to protect the planet and end poverty by 2030, the next few years will be critical in making the world a more sustainable place.

We are actively working to analyze our business and working practices throughout our entire value chain, assessing where we can make improvements. Visit our website, where we share more information about this journey and our progress.

THE INDUSTRIES WE SERVE

We believe that true innovation comes in the form of transforming industries by setting new standards in efficiency and through the economic and environmental advantages of technology and digitalization. We serve these industries:

Port terminals

The majority of the world's food, construction and energy supplies are transported by a global maritime network of vessels, ports and import and export terminals, making them critical to populations, their growth and development.

By maximizing the speed at which material can be unloaded from a vessel and transferred to an onward receiving system, a terminal's efficiency is increased. This is vital to meet rising population demands. Our fully enclosed ship unloading and loading systems also protect the environment, eliminating waste from cargo spillage and dust emissions in the material handling process.



WE MAKE IT POSSIBLE TO ELIMINATE CARGO SPILLAGE AND DUST EMISSIONS IN MATERIAL HANDLING

Food and farming



Food and farming are the most important industries we have. Managing the process of food's distribution and transport in the most efficient and cost-effective way possible, with minimal waste, allows more of the world's foodstuffs to get to where they are needed the most.

Bruks Siwertell does not grow food; but our machines are vital throughout its supply chain in many countries. We handle fertilizers and the raw materials needed for food production, and our ship unloaders, loaders, conveyors, and storage and reclaiming systems have a worldwide reputation for handling all forms of agricultural bulk commodities.



Forestry



The forestry industry is a vast global network of forest farmers that grow, manage, harvest and supply raw materials to all other wood-related industrial applications. It requires heavy-duty machinery that is designed to operate over rough terrains and reliably deliver significant wood-processing and handling power within a forest setting, whatever the weather.

Our forestry products offer long service lives and include trailers, cranes, soil scrapers, road graders, and harvester heads.


Panelboard



The panelboard industry is a major timber consumer, and makes good use of waste wood residues. All our equipment, including machinery for chipping, milling, and grinding, is designed to maximize yields and ensure the peak operational performance of any engineered board manufacturing plant.




Bioenergy

 Bruks Siwertell has a long history of handling and processing the wide variety of bioenergy materials needed for the world's shift to a more sustainable future.

Any organic material can produce bioenergy, and a significant proportion comes from forestry and wood-based sources including logs, wood chips, waste wood residues, bark and hogged fuel, and sawdust. Our technology helps maximize biomass yields, and it supports every part of the biomass logistics chain, from raw material to the pellet.


Biofuels

 Our technology is found throughout the biofuel industry, right up to the refinery. It is able to efficiently handle and process the huge range of materials that can generate biofuel from forestry waste, to agricultural and wood products.

Cellulose is a mainstay for biofuel production, and many crops are specifically grown for the purpose. Efficiently transferring these sensitive materials requires a specialist approach, and our Siwertell ship unloaders and loaders offer some of the market's highest capacities.




Sawmills

 Sawmills operate with significant demands placed on equipment capacity, efficiency and availability, along with safety and environmental protection. Bruks Siwertell meets all these requirements, delivering high-quality machinery, which is easy to maintain and performs well under high-use conditions.

The primary job of a sawmill is to process timber products from a log to a board or plank, but about half of the log will end up as by-products, such as sawdust, chips and bark. We have a wide range of market-leading equipment specifically designed for handling and processing sawmill by-products.




Power generation

 One of the most critical roles of the global dry bulk sector is to secure the processing and handling of fuel for power generation.

We have built a strong global reputation for handling dry bulk fuels. Coal continues to play a major role, but biomass is also gaining ground. In pursuit of a switch to renewable energy production, we have ensured a smooth transition from coal to biomass for a number of companies. In the port, our range of totally enclosed Siwertell screw-type ship unloaders, loaders and conveyors cleanly and efficiently load and discharge vessels, eliminating spillage and dust emissions.

Pulp and paper

 Over the centuries, the pulp and paper sector has seen significant changes. Today's boom in e-commerce has driven demand for container board, cardboard and carton board packaging, and with ever-more retail transitioning online, this trend has little chance of slowing down.

Raw materials are prized commodities, so keeping material costs low and returns high is crucial. Bruks Siwertell understands that yields are key and offers a portfolio of market-leading wood processing and handling technology for this industry.

Other industries

Bruks Siwertell delivers exceptional material handling, transporting, and processing technology that ensures high capacities, reliability, environmental protection and minimal through-life costs.

From steelmaking through to furniture production, our portfolio of unloading, loading, conveying, harvesting, processing, transporting, and storage and reclaiming systems are relied upon at critical points in multiple industrial supply chains.





CUSTOMER SUPPORT



Bruks Siwertell's equipment is recognized worldwide for its reliability and long service life. We offer planned service agreements and on-demand support for our installations.

We are committed to customer satisfaction. Our engineers are industry experts and offer quality installation, commissioning, training and maintenance on all machinery. Contracting us for service support ensures that your systems always meet the latest performance and safety standards and deliver maximum efficiency.

A proactive approach to maintenance ensures fewer breakdowns. Service labor and spare parts can be planned well ahead of critical replacement dates, reducing costs. Wear and tear can be attended to in a timely manner instead of leading to breakdowns.

Only original spare parts

Whether replacing damaged, consumable or wear parts, at Bruks Siwertell we only use original spare parts when carrying out service and maintenance tasks. This is because we know that using the best quality components ensures the highest level of availability and minimizes downtime.

Committed to long-term service

All our systems have a solid reputation for reliability, reducing the chance of unplanned downtime and its associated costs. We have a global network offering through-life original equipment manufacturer (OEM) support for spare parts and service.

Maintenance costs for our technology are minimized because of the excellent build-quality and the long life-expectancy of wear parts.

When major changes are required, some units can be upgraded, modernized and relocated if necessary, so operators can be safe in the knowledge that their purchase of our machine will pay back many times throughout its lifetime.

We offer planned, on-demand and emergency service solutions, all designed to ensure long-term performance and the maximum availability of the equipment.

Preventative maintenance packages minimize downtime. They are delivered through scalable, cost-effective service agreements, where we take as much responsibility as you need us to. We are also here to support our customers with upgrades, conversions, inspections, supervisions, and spare parts and consumables.

An aerial photograph of a port terminal. A large ship is docked at a pier, with a complex system of blue and yellow conveyor belts extending from the ship's deck to a large pile of reddish-brown bulk material on the pier. The water is a deep green color. The image is overlaid with a semi-transparent blue banner containing the text 'BULK HANDLING' and a white banner containing the text 'MAXIMIZE YOUR TERMINAL'S POTENTIAL'.

BULK

HANDLING

MAXIMIZE YOUR TERMINAL'S POTENTIAL

Efficient, reliable bulk handling technology in ports is essential for the world's dry bulk trades. Our systems can be found globally, serving large-scale dedicated terminals, through to single road-mobile unloaders operating flexibly with minimal port infrastructure.

Bruks Siwertell's products meet worldwide environmental protection regulations and ensure that every terminal achieves the highest possible operational efficiency. For ports, our equipment includes continuous screw-type ship unloaders, ship loaders, conveying systems, truck unloaders, and stacking and reclaiming solutions. All deliver substantial cost savings by ensuring optimized operations and through-life reliability and performance.

PRODUCTS AND SOLUTIONS

SHIP UNLOADING



Our market-leading ship unloaders offer the most efficient and environmentally sustainable dry bulk material transfers possible. Siwertell screw-type ship unloaders deliver high rated capacities, excellent through-ship performance, with no cargo spillage or dust emissions.

They can discharge sensitive cargoes with minimal degradation, unload compacted cargoes with high

digging forces and no loss of efficiency, and all with low power consumption.

In fact, the through-ship capabilities offered by Siwertell ship unloaders have enabled some operators to reduce their unloading days by 50 percent or more, depending on capacity, translating into a 50 percent reduction in berth occupancy and the possibility of higher annual intakes, positively impacting return on investment.



INCREASING THROUGH-SHIP EFFICIENCY, DIRECTLY IMPACTS TERMINAL PROFITABILITY

Efficient material pick-up

Siwertell ship unloaders are equipped with a unique inlet feeder that ensures efficient material pick-up into the vertical screw conveyor, providing consistently high unloading capacities, from 200t/h to very high rates of more than 3,000t/h. Conveyors are available in different sizes depending on material and the capacity required.

Unloaders can handle almost any dry bulk material, switch between cargoes, and direct discharge to trucks and rail wagons or onto any type of jetty conveyor.

Unique weight advantages

Jetty reinforcements for bulk handling equipment can easily correspond to 50 percent of the cost of the actual equipment; a powerful argument for operators to consider lower weight machines.

By choosing any Siwertell unloader over competing technologies, port operators can reduce operating expenditure as well as capital. The mechanical screw system is lighter, with a smaller footprint and can handle much higher throughput volumes than a bucket chain or grab crane of equivalent size.

Designed to meet needs

Siwertell unloaders can be ordered as stand-alone products or as part of complete terminal solutions. They are usually customized to meet operational requirements and can be installed as stationary or rail-traveling systems. Siwertell unloaders are also available as standardized road-mobile or port-mobile units.

For some operators, standardized systems are the ideal solution. They deliver many of the advantages that tailor-made systems offer, but have added cost benefits and usually shorter delivery times. We help all our customers find the best system to suit their needs.



**WE CAN LOAD
SHIPS AT A RATE OF
ABOUT ONE METRIC
TON EVERY SECOND**

SHIP LOADING



Per metric ton of materials handled, our ship loaders offer one of the most cost-effective and environment-friendly methods of loading dry bulk materials into a vessel. Bruks Siwertell's ship loaders are based on screw, aeroslide or belt conveying technologies and are delivered as stand-alone equipment or as part of terminal systems.

They are delivered with loading spouts designed to suit the material to be handled, reducing dust and spillage to a minimum. These include double-walled flexible spouts and cascade-type bellows with a lightweight, compact design.

Our ship loaders are typically supplied as stationary or rail-traveling units, but can also be configured with rubber wheels for port mobility. To provide easy access to all parts of the ship's hold, our loaders offer an optimized combination of movements including slewing, luffing and traveling. Shuttling capabilities are also an option for even greater hold access. For screw-type loaders, an additional scissors-arm configuration can be applied.

Economical and efficient

All our ship loaders are tailored to your needs, with a focus on performance. Outstanding performance relates not only to capacity, but also to efficiency,

economy, the environment, safety and careful cargo handling.

We offer fully versatile systems and can meet the needs of loading different materials used by the same industry. For example, cement and clinker have totally different characteristics, but our loaders can be equally environment-friendly and efficient when handling both materials. This flexibility extends to vessel size; a loader can deliver the same efficiency to coastal barges or large ocean-going bulk carriers.

Loaders matched to materials

Screw-type loaders can accommodate ships up to Panamax size and are often used to handle abrasive, or powdery and dusty materials such as sulfur, clinker, and minerals.

Aeroslide systems handle easily-fluidized materials such as cement, dry fly ash and alumina, loading ships up to 80,000 dwt. They must be installed on a downward slope, as gravity is essential to their operation.

Belt-conveyor loaders demand minimal power-consumption and load ships up to 300,000 dwt. They handle a broad range of commodities including lumpy, granular and sticky materials such as coal, ores, minerals, grain, feedstuffs and fertilizers, and can be covered to protect cargo and the environment.



CONVEYING



Industry-leading innovations ensure that our conveyors consistently deliver smooth, safe, continuous material flows for minimal operating and maintenance costs. They are specified to ensure that, from ports to processing plants, all are served by conveying technology that delivers optimum dry bulk transfers.

To ensure clean, dust-free operations our traditional belt and idler conveyors can be totally or partially enclosed. They can be configured to meet every requirement and can carry virtually any dry bulk material from low to very high capacities. Our screw-type and air-supported conveyor ranges are totally enclosed, eliminating dust emissions from material handling.

Feeding ports to power-generation plants

Worldwide, our conveying systems secure the efficiency of dry bulk material handling and wood-processing facilities, including ultra-large power-generation plants that demand some of the largest volumes of material in the world.

Bruks Siwertell offers one of the most comprehensive ranges of conveyors on the market from traditional belt and idler configurations and unique horizontal and vertical screw conveyors, to efficient air-supported, low-friction belt technology. Aeroslide, chain and vibrating conveyors complete the range.

TRUCK UNLOADING



Bulk trucks are a flexible, dust-free, efficient way to distribute the huge volumes of processed wood required by the bioenergy market and also by the pulp and particle board industries. Bruks Siwertell has developed a unique truck unloading portfolio that focuses on the fastest, most efficient way to discharge them, ideal for both port terminals and wood processing plants.

Our truck dumpers can reduce unload cycle times and alleviate traffic congestion in almost all operations. We offer systems that unload both end-dumping and self-unloading trucks, ensuring that onward processing is as effective as possible.

Bruks Siwertell's truck unloader range includes back-on, drive over, and extended arm truck dumpers, and a receiving hopper for self-unloading trucks, which can be fitted with fixed or articulating covers.


Tipping platforms have been designed to perform under the extreme, high-use conditions typical of most processing facilities. Our platform has an expected service life of two million tipping and lowering cycles. This will far exceed a 25-year full-time service life, making it an ideal long-term investment.



**NOT JUST A TO B:
LOOK FOR CONVEYORS
THAT CAN COMPLETELY
TRANSFORM YOUR TERMINAL**



PORT TERMINALS

 Bruks Siwertell aims to make today's port terminals as clean, efficient and sustainable as possible by using market-leading dry bulk material handling and processing technology. To achieve this, terminal equipment must be matched to customer needs.

We work with the unique requirements of every import and export dry bulk terminal including regional regulations, capacity demands, volumes and types of materials and vessels handled. Existing infrastructures frequently have to be taken into account as well.

Could your terminal be more profitable?

We have developed a value calculation tool that enables us to accurately simulate the impact of different technical solutions on the long-term profitability of both existing and planned new terminals. This is especially important as terminals use their machinery for decades.

Modeling includes factors such as the cost of the jetty, conveying system, and wider operational figures such as demurrage and personnel costs, energy consumption and material handling waste, for example, spillage. This knowledge holds the potential to lift operations to new levels of profitability.

Cargo flows: taking the world's pulse



The safe, efficient transportation and handling of dry bulk materials underpins most aspects of modern global trade including power generation, industrial processes, construction and manufacturing, and food production.

We handle virtually any dry bulk material and have the industry's most comprehensive range of material handling, wood-processing and forestry equipment; from standalone units through to complete systems, all of which secure the success of vital industry applications and the bulk commodities market as a whole.

Economic to environmental advantages

The economic, efficiency and environmental arguments for our ship unloading systems have become ever more persuasive. Operators look to our technology to cut their cargo losses by eliminating spillage and preserve the quality of their shipments, especially delicate materials such as grains and alumina, through gentle, high-capacity material handling. Our totally-enclosed Siwertell unloaders also protect the environment from dust emissions.

Siwertell ship unloaders offer the safe containment of fire-risk materials like biomass and even more volatile, explosive commodities such as sulfur. They can also seamlessly switch between dry bulk materials with very different properties.

Our ship loaders efficiently deliver extremely high-capacity operations for the transfer of dense, abrasive materials such as iron ore, coal and aggregates, right through to powdery cargoes.

Tailored conveying systems, of every type, further enhance operational performance.

Entire terminals can be specifically designed to maximize the efficiency of handling one or multiple commodities and can smoothly integrate unloading, loading, conveying and storage systems.



**OUR BULK HANDLING
SYSTEMS ARE DESIGNED
TO OPERATE IN ALL CLIMATES:
FROM DESERT HEAT TO
ARCTIC COLD**



WOOD

PROCESSING


DELIVERING CUTTING-EDGE ADVANTAGES

We supply complete technology chains for many wood-processing industries. From the forest to the sawmill, and beyond into the pulp and paper, panelboard, pellet, biofuel and bioenergy industries, our technology is relied upon throughout the world across thousands of installations.

Our portfolio comprises everything from chippers, truck receiving systems, conveyors, and storage and reclaiming solutions, through to screening equipment, hammer mills for both wet and dry wood materials, as well as butt-flare reducers and knife-ring flakers.

PRODUCTS AND SOLUTIONS

CONVEYING


 Bruks Siwertell's conveying systems secure dry bulk material flows for many types of facilities worldwide. Our conveyor portfolio includes efficient air-supported belt technology, aeroslide conveyors, chain conveyors, high-capacity traditional idler belt conveyors, totally enclosed robust screw conveyors, and vibrating conveyors. Each has a unique advantage to offer operators and is specified depending on their application.

Advantages worth considering

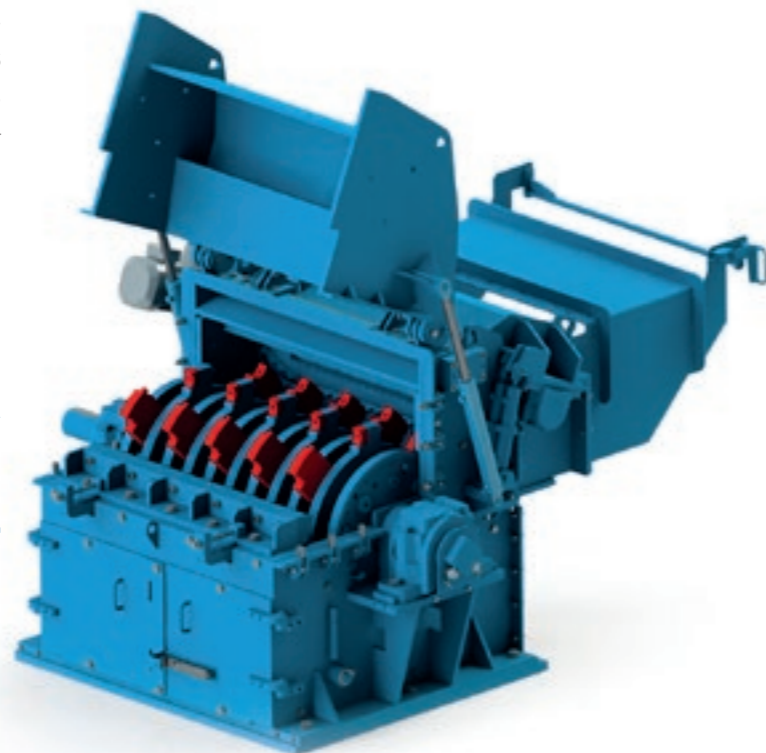
Our air-supported conveying systems, the Tubulator and The Belt Conveyor, offer advances that set new standards in conveying. Low-friction, air-cushion conveyors eliminate rollers, and therefore deliver huge benefits in terms of operational and maintenance costs. Furthermore, they offer high-capacity conveying with no material degradation and minimal equipment wear.

A THIRD OF THE WORLD IS COVERED IN WOOD, AND FOR OVER 125 YEARS WE HAVE SPECIALIZED IN HANDLING AND PROCESSING IT


SCREENING

 Screening is a vital step in bulk material-processing, maximizing a plant's yield by minimizing losses and optimizing production efficiency. Separating oversized pieces from a load and delivering a consistent size and quality in end products makes onward processing more efficient. The removal of fines and other unwanted pieces also eliminates material handling problems and damage to downstream machinery.

Bruks Siwertell offers a number of screening options including gyratory free-swinging and vibratory screens.




CHIPPING

 Wood-chippers have been used for centuries, making the most out of waste wood materials. Today's machines have high-performance capabilities vital to supporting the booming renewable energy market, pulp industry and numerous other key applications.

As well as mobile systems, our range of chipping equipment includes drop-fed and horizontal-fed disc chippers and gravity and horizontal drum chippers. Bruks Siwertell's chipping machines are at the forefront of the industry, supplying facilities worldwide with high-capacities and quality, consistent wood chips.

The size and variety of the wood to be processed are usually the deciding factors for which technology to select; some industries require much greater control over chip size, while others need very low running costs. We meet every one of these needs.

WOOD RESIDUE PROCESSING

 Specifically designed for handling waste wood products, our Rotom hammer hogs, available as drop-fed and/or horizontal-fed versions, feature a two-step size-reduction process to ensure that the end product is no longer waste, but effectively

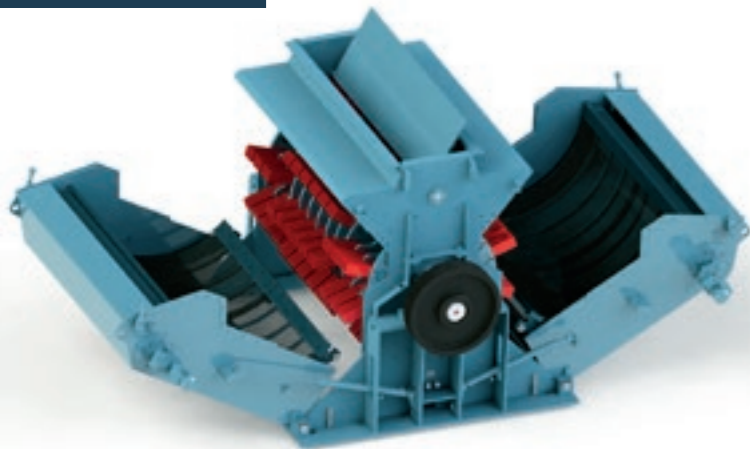
a valuable fuel commodity. They are extremely robust and compact.

Fitted with a unique combination of swinging and fixed hammers, their powerful action makes them the ideal choice for shredding bark, recycling waste wood and other waste timber products.

Developed over decades, Rotom hammer hogs offer years of trouble-free operation. They have a modular design, which enables a unit to be perfectly tailored to suit a wide range of needs, including various in-feed and rotor configurations.



TURNING WASTE INTO VALUABLE FUEL DELIVERS ECONOMICALLY AND ENVIRONMENTALLY



GRINDING AND MILLING



Bruks Siwertell's customer-driven milling solutions are specifically designed to add value to wood processing facilities. Owners benefit from higher yields, improved efficiency and our equipment's long, effective service life. Even small changes in milling can deliver significant savings and processing advantages.

Our heavy-duty milling systems process both dry and green wood and include butt-flare reducers, hammer mills, and knife ring flakers; all specified to maximize the return on waste wood products and ensure that a wood product is in ideal condition to be processed. Any element that can be enhanced during processing will positively impact efficiency and therefore yield.

THE CARBON FOOTPRINT OF AN AUTOMATED STACKER RECLAIMER IS A FRACTION OF A MANUALLY MANAGED PILE, AND OFFERS THE LOWEST POSSIBLE LIFECYCLE COSTS

STORAGE AND RECLAIMING



Stacker reclaimers are a combination of technologies that pile and then retrieve dry bulk materials in a very efficient way. They can also blend material. This is important for organic commodities such as wood chips, bark or sawdust to reduce fiber losses from microbial action and heat build-up in the pile.

Bruks Siwertell's stacker reclaiming systems include blending bed stacker reclaimers, cantilever chain reclaimers, circular stackers, linear overpile portal reclaimers, overpile stacker reclaimers, stoker reclaimers, and traveling stackers. They can handle a wide range of materials from aggregates, coal and iron ore to grains, sulfur and wood products.

Environmental and cost benefits

The biggest benefit of an automated stacking and reclaiming system is cost saving. Bruks stacker reclaimers are completely automated, requiring no operator or mobile machinery that can damage sensitive materials as they drive over the pile. The carbon footprint of our automated stacker reclaimers is a fraction of manually managed piles.





FORESTRY

TECHNOLOGY

MAKING THE MOST OF NATURE'S RAW MATERIALS

The forestry industry is a vast global collective of large and small forest farmers, comprising a mix of private owners, logging companies, organizations and nationally owned reserves. It holds huge environmental accountability, both from an ecological and carbon sequestration perspective, and must act as a bridge between nature and commerce, supplying one of the world's most widely used raw materials.

For the majority of forest owners, part of managing their woodland and maintaining a sustainable forestry strategy, means that tree planting outstrips tree harvesting. Bruks Siwertell's Forest Technology Group (FTG) works in partnership with owners of responsibly managed forests.

THE FORESTRY INDUSTRY FORMS A VITAL LINK BETWEEN NATURE AND COMMERCE; WE HELP BRIDGE THAT GAP

A good day in the forest



FTG has a long history of forestry technology and has the knowledge and expertise to enable all its customers to have 'a good day in the forest'. With our broad product range, we can meet the forestry industry's various log length requirements, or planting formations that make some trailer sizes more suitable for some forests. From small agile units that can snake through sites, through to extremely robust, high-use powered trailers designed to support forestry operations with heavy loads and complex extraction routes, we have the technology.

Supporting ecological assets

We support people working in forests with unique, high-quality equipment for harvesting, processing and transporting timber. Our forestry technology ensures that forest owners are able to work efficiently, sustainably and profitably with robust, hard-wearing machinery that offers long, reliable service.

FTG forestry equipment includes trailers, cranes, soil scrapers, road graders, and harvester heads. Our technology is supplied under the FTG Moheda, FTG Mowi, FTG Källefäll, FTG Forest and FTG Special Cranes brands, each with their own distinct capabilities and customer bases.

Lifting logs lessens ground impact

Our powered trailers, with integrated knuckle-boom or parallel cranes and grabble heads, are able to lift felled logs clear off the ground and then load them into the trailer. This is not only highly efficient, but also lessens the site impact of harvesting and general ground damage in comparison with skidding or cable-crane systems. Extraction routes for vehicles able to use this type of trailer are carefully planned and managed, particularly on wet and sensitive soil sites.

Different forests, different technology

We help forest farmers employ the equipment that best suits the size and scale of their operations, supplying systems for all-terrain vehicles, tractors, mini-forwarders, and forwarders.

For all-terrain vehicles, we deliver small, simple trailers, which are ideal for the scale of forest farm that use them to get timber out of the forest. Crane installations are also possible on the trailers of these vehicles.

Our equipment for tractor applications is well-suited for small to medium-sized forest owners who already have a tractor and want to carry out professional forest thinning or harvesting. Our powered trailers and cranes can adapt tractors to deliver significant lift and log-carrying capacity.

PRODUCTS AND SOLUTIONS



**WE ARE PART OF SUSTAINABLE
SUPPLY CHAINS; ALL THE WAY
FROM THE FOREST,
TO THE PROCESSING PLANT,
AND IN THE PORT**

FOREST TRAILERS

Our powered trailers, with hydraulic cranes and grapple heads, are forest work-horses, loading felled timber quickly and efficiently and moving it from the stump to the roadside. They are ideal for use with standard tractors, which forest farmers typically already own for other applications.

Categories of trailers are dependent on their load-carrying capabilities. The smallest trailers can be towed by all-terrain vehicles (ATVs), up to very powerful trailer systems employed in large-scale forestry operations. Our portfolio of equipment can be matched to suit any size or category of trailer applications.

Developed over decades

All our powered trailers are underpinned by decades of development, enabling smaller-scale to large-scale forest farmers access to technology that has been designed with generations of customer-driven advances.

They are built to last, and provide the best return on investment with low operating and maintenance costs and high resale values.

Our forestry technology is developed on a continuous basis, and our portfolio of FTG Moheda, FTG Mowi, FTG Källefäll and FTG Forest brands lead the market. Whether an operator is looking for an all-terrain vehicle, tractor, mini-forwarder or forwarder application, we have a trailer and crane combination that can be tailored to suit.

Our different brands are often chosen on an application and operator preference; forest farmers can select trailers and cranes safe in the knowledge that whichever they choose, they are getting the best equipment for their operations.

MINI FORWARDERS

FTG is a well-known supplier of cranes to forest machine manufacturers. Mini-forwarders are well-suited for medium to large-sized forest owners and for professional thinning and harvesting companies. For many, the mini-forwarder has replaced the tractor and is mainly employed for thinning operations, but can be used as a complementary technology for final harvesting.

Going up the scale, the most powerful and largest forwarders are used for final harvesting. They offer forestry owners some unique advantages including the ability to work at steep inclines and deliver significant timber extraction capabilities over relatively long distances.

ACCESSORIES

FTG grapples are made of high-quality materials to ensure durability and reliability. The main grapple structure combines an excellent arm geometry with a wide opening. They have a low weight and a strong construction; the most important aspects of grapple design. One hydraulic cylinder controls the grapple arm, while offering a high gripping force and fast cycle times to maximize loading performance.

Apart from grapples, FTG also offers a range of other specially designed accessories to complement all products in its range, such as lighting, rotators, ventilation packages, hydraulic systems, tires, and winches.



FTG MOHEDA



FTG Moheda forestry trailers offer a high degree of manoeuvrability and are robustly built to high specifications, delivering years of heavy-duty work. They are fitted with knuckle-boom cranes that have powerful lifting capabilities and long reaches.

Small to large trailers offer unique advantages. The smallest FTG Moheda is able to snake its way through off-road terrain. With a nine-ton load capacity, this agile trailer is suited to smaller tractors. As standard, it is equipped with a telescoping knuckle-boom, crane fitted with a grapple. It has a 6.5m outreach and 260kg safe working load. The crane has a double-slewing motor and a linkage system, ensuring smooth, efficient movements.



WE HAVE PIONEERED MANY OF THE FORESTRY INDUSTRY'S MOST WIDELY USED SYSTEMS

Powerful lifts at long reaches

At the opposite end of the scale, our largest FTG Moheda trailer has a 15-ton load capacity and can make its way through the most demanding terrain thanks to its powerful hydraulic drive. The trailer is most suited to larger forest owners and forestry contractors, but can be used for multiple applications.

As standard, its knuckle-boom crane, fitted with a grapple, has a 7.5m outreach with a 500kg safe working load. It delivers smooth, efficient movements and has an angled lifting arm that allows operators to park the crane firmly against the trailer. This also makes the crane more powerful at short reaches. If an operator needs an even more powerful crane at a longer outreach, this trailer can support our biggest crane, the Moheda M81DT. At a maximum reach of 9.4m, it has a lifting capacity of 500kg and 1,250kg at 4m.

FTG MOWI



Like all FTG trailers, an FTG Mowi trailer offers heavy-duty service and excellent manoeuvrability. All our FTG Mowi trailers are fitted with Mowi parallel cranes. They are powerful, fast, and easy to operate and are able to perform two movements simultaneously during retraction. FTG Mowi parallel cranes have a movement pattern that enable loads to be stacked high.

Environmental and cost benefits

Furthermore, an FTG Mowi crane requires a lower oil flow in comparison with other cranes. This enables it to be operated at low engine speeds, which lowers fuel consumption, therefore offering both environmental benefits and cost-savings. It also means that noise levels in the driver's cab are kept to more comfortable levels. At its maximum outreach of 8.2m, the largest FTG Mowi crane has a lifting capacity of 350kg and 1,000kg at 4m.



OUR TECHNOLOGY ENABLES A GOOD DAY IN THE FOREST

FTG KÄLLEFALL



The FTG Källefäll portfolio includes a wide range of forest trailers, cranes, winches, grapples and forestry equipment accessories.

FTG Källefäll forest trailers have a load capacity from four up to 12 tons, equipped to suit the needs of professional forestry contractors. They are complemented by our FTG Källefäll range of telescoping forest cranes, which have been specially developed for our forest trailers.

FTG Källefäll cranes are incredibly flexible and able to carry out a number of tasks in the handling area. They have outreaches from 4.2m to 9.4m and are constructed from high-quality materials and components, ensuring a low weight to maximum strength ratio. Their optimal design and development provide a long service life and minimal service needs.

FTG FOREST



FTG Forest complements the full range of FTG technology, offering a wide range of equipment from trailers to accessories and cranes.

Cranes are made of high-quality materials with maximum strength, whereby an optimal design guarantees lower weight and long service life.

FTG Forest trailers and cranes are ideal for transporting and loading logs and other forest material.

FTG SPECIAL CRANES



Through the FTG Special Cranes brand, we are able to offer adapted cranes for specialist applications. We have developed a compact crane with a specially adapted short pillar for installation on garbage trucks. It has a single telescope, with an outreach of 6.8m.

LEARN MORE

Please scan the QR codes below to visit our YouTube channels. You will see our equipment in action, and find product videos, customer cases, as well as explanatory animations.



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