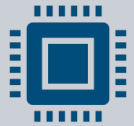


# BRUKS & MOBILE CHIPPING OF BIOMASS

# Bruks Siwertell



An introduction to the The Bruks Mobile Chipping Concept.



This Scandanavian forestry model accelerates the local use of slash/biomass and services district heating in remote (and urban areas), along with producing a high quality chip suitable for further processing/export.



Joanne Turnell – Bruks Siwertell - Sales Representative Canada

# ACKNOWLEDGEMENT

My home is situated upon the traditional territories of the Erie, Neutral, Huron-Wendat, Haudenosaunee and Mississaugas. This land is covered by the Dish With One Spoon Wampum Belt Covenant.

# 2023 WILDFIRES TRIPLE CANADA'S INDUSTRIAL EMISSIONS

## Wildfires could be triple Canada's industrial emissions. But they're excluded from the official carbon tally

WENDY STUECK > ENVIRONMENT REPORTER

INCLUDES CORRECTION

PUBLISHED DECEMBER 1, 2023

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Residents watch the McDougall Creek wildfire in West Kelowna, B.C. on Aug. 17, from Kelowna.

DARREN HULL/AFP/GETTY IMAGES

In light of the 2023 Wildfires, here in Yellowknife and across the rest of Canada we need to seriously look at the way we treat logging slash as an industry.

Minister Guilbeault delivers Canada's national statement at COP28

From: Environment and Climate Change Canada Speech

December 9, 2023 - Dubai, United Arab Emirates

...Last summer, the whole planet saw our country burning.

A fire chief in British Columbia told me that he sent his teams facing a life-threatening situation to fight the fire of their lives.

While it's true that we experienced historic forest fires, unfortunately, we can no longer say that these disasters are a new phenomenon.

This isn't new for many people in this room—you've been sounding the alarm for decades.

People outside of these walls are looking at COP28 with both hope and a sense of skepticism.

We hear them!.....

<https://www.theglobeandmail.com/canada/article-wildfires-emissions-carbon-cop28/>



# Canada's burning question?

**Will Canada Legislate an end to open air burning of slash?**

An alternative to burning slash is chipping and Bruks technology is well proven in Scandinavia, supplying regional CHP's (Combined Heat and Power plants) making better use of slash and residual fibre across a range of operational conditions.

# BRUKS SIWERTELL

Bruks Siwertell is the market leader in the biomass handling and processing sector.

We support every part of the biomass logistics chain, from its forest residual form to the pellet.

# Bruks History 125 years in the making

Bruks means industrial operation in Swedish,

- Klöckner, which dates back to 1898
- Rotom Verkstäder
- General Vibrating Conveyor
- Celtec Engineering
- Rockwood Materials Handling
- Bruks & Siwertell Merger

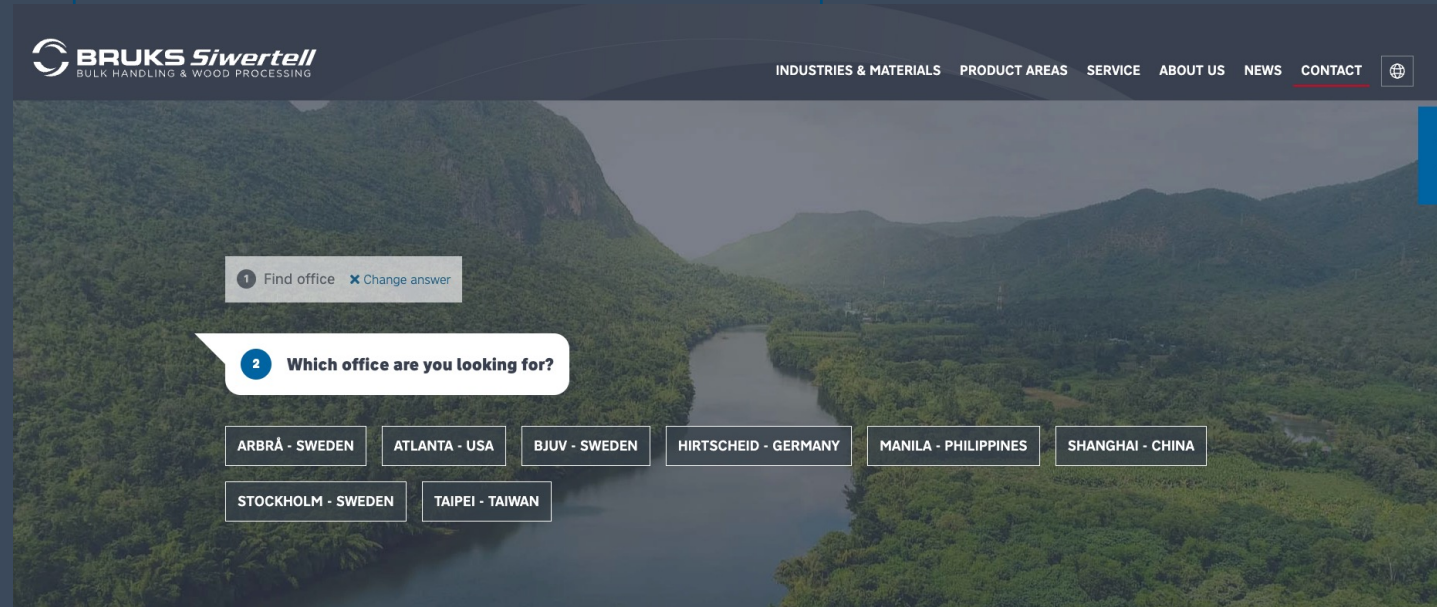
Bruks is now one of the most relied upon brands in wood processing, conveying, milling, screening, and stacking and reclaiming.



# OUR FOCUS IS ENGINEERING AND EQUIPMENT SUPPLY

Bruks has witnessed 125 years of technological developments in the transfer, transport and processing of wood.

As the Canadian Representative for Bruks Siwertell, I am supported by a vast network of Engineers who pass their experience on in the form of market-leading solutions that deliver excellent levels of operational performance, safety, efficiency and environmental protection.



We have 8 main locations worldwide to support our customers.



# OUR KNOW HOW IS WOOD PROCESSING

Canadian Highlights!



In Canada Bruks/BMH developed a cold weather package for Storage and Reclaim with installations at

Domtar Dryden Ontario

Domtar Espanola Ontario

Thunder Bay Pulp & Paper, Ontario

A large blue industrial truck dump structure is shown in the process of being installed at a processing plant. The structure is tilted upwards and supported by metal beams. In the background, there is a large beige industrial building with a blue cylindrical silo labeled 'Carbon' and various pipes. The sky is clear blue with some light clouds.

# TRUCK RECEIVING

Bruks is installing its first Canadian Truck Dump at Domtar  
in Windsor Quebec in July 2024.



**Bruks Hammermills are widely used in the wood pellet industry with Canadian installations in Quebec at Groupe Lebel Cacouna & Barrette Chapais**





**Our Disc Chippers can be found at Tolko Lavington BC, and  
White River Forest Products in Ontario, chipping sawmill residuals.**



# SCREENS

Screens are often used in conjunction with truck receiving of wood chips allowing for further sorting and or size reduction prior to the next process.

A large industrial facility at a port, featuring a prominent green metal structure supporting a long, enclosed conveyor system. In the background, a large ship is docked at a pier, and a body of water stretches towards a range of mountains under a clear sky. The scene is set in a wooded area with some snow on the ground in the foreground.

# WOOD PELLET CONVEYING PORT OF SAGUENAY

Tubulator completely enclosed conveyors are utilized in biomass/wood pellet applications, Port of Saguenay, Prince George Pulp and Dunkley Lumber in PG.



**BRUKS *Siwertell***  
BULK HANDLING & WOOD PROCESSING



# DRUM CHIPPING

CAN ACCEPT

BARK ON / FOREST RESIDUES / CROOKED LOGS / BRUSH

IDEAL FOR CHIPPING SLASH AND FOREST RESIDUE

# MOBILE CHIPPING

is a Bruks Drum Chipper with its own diesel power source that can be mounted on a Forwarder or Truck to allow chipping in woods or roadside, for use with forest thinning applications and remote terminals.

Densification for transportation, chipped wood is the most economical way to transport slash piles/forest residues for further processing or combustion.

Forwarder Mounted to suit your brand of Forwarder.



Forwarders are equipped with comfort cabs and ergonomic operations.



Forwarder mounted mobile chipper chipping at terminal



**Flat Bed Truck mounted mobile chippers work hand in hand  
with your existing equipment with universal mounts.**

 **BRUKS *Siwertell***  
BULK HANDLING & WOOD PROCESSING

# Different mounting configurations can be accommodated



# MOBILE CHIPPING SYSTEM

A short movie to give an overview of the process of In wood's or roadside chipping with a Bruks mobile chipper.



[CLICK HERE](#)



# Will Canada legislate an end to slash burning?

The number of towns in Canada with district energy systems are few and far between compared to Scandinavian towns where more than 60% run on district energy that includes wood chips and wood pellets.

# Conclusion:

## Utilizing slash and forest residue for energy makes sense.

### DISTRICT ENERGY

- District Energy Systems are regional solutions for biomass/bio-energy/heat
  - Powering Govt buildings, schools, community centers, homes, apartment blocks, etc
- In Sweden more than two thirds of the heat supply to the district heating systems is based on biomass and waste, biomass alone accounts for about half of the heat supply.
- The Swedish model has shown that chip quality and the treatment of biomass matters when working to accelerate to scale the use of biomass and help communities realize a clean energy future.
- Bonus side effects are by reducing the Fuel Load in areas surrounding Urban communities it will help create wildfire resilience, while providing a local and renewable power supply.

### OR EXPORT IN PELLET FORM

- Densification for transportation is the only way to economically transport wood chips or wood pellets.
- Densification and moisture reduction as described in the video can be important in reducing transportation costs for biomass.
- Chip Quality Matters to the pelleting process. Small uniform chips free of debris add value downstream to the pelleting process.

**Bottom Line**



**CHIPPING FOREST RESIDUALS IS GOOD FOR COMMUNITIES AND BUSINESS**

**THANK YOU**