The Javo Toploader
Bulk Material Handling

The simple 3-in-1 solution for

Fuel Reception, Storage and Recovery

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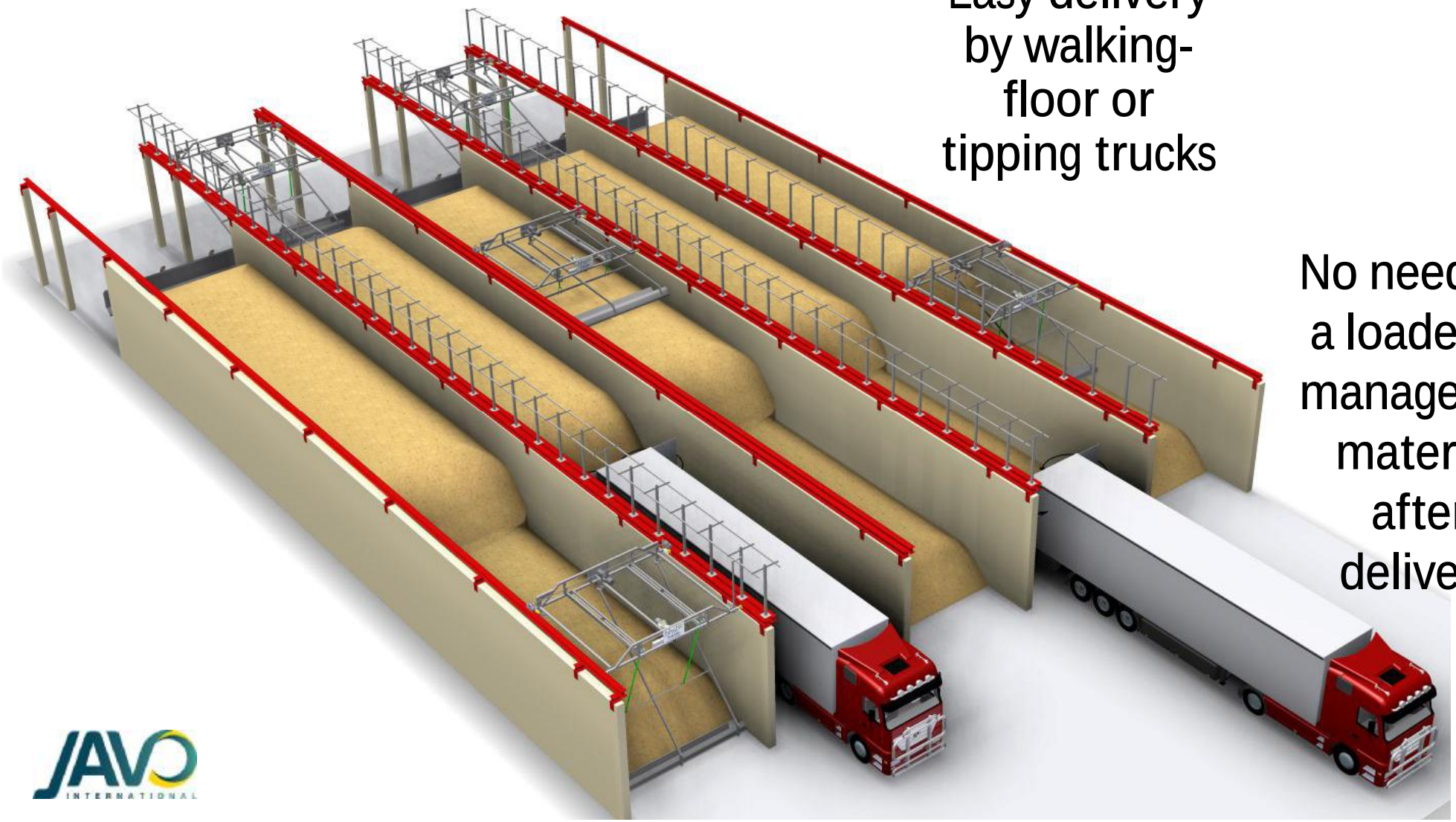
Easy delivery by walking-floor or tipping trucks



No need for a loader to manage the material after delivery

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Storage & handling of bulk materials





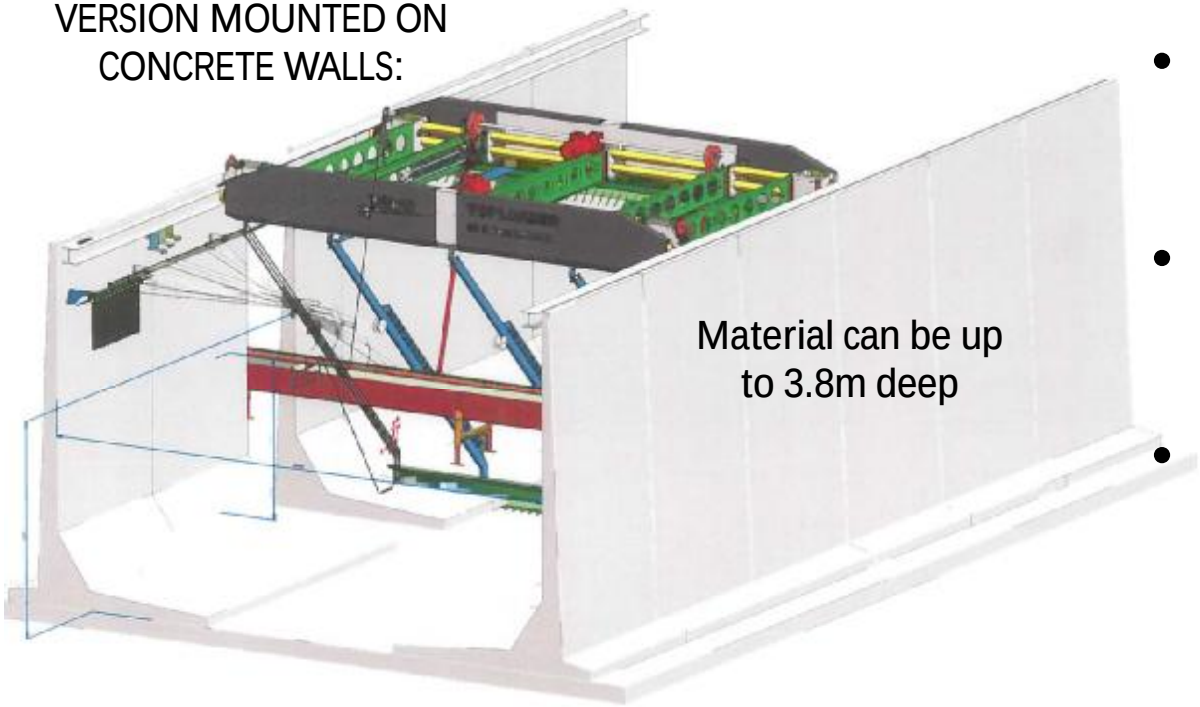

For a broad variety of materials :

- Wood fuels (pellets, chips, hog fuel, bark, sawdust, peelings, shavings, sander dust etc)
- Other bulk material (soil, sand, food waste, recycled glass, sugar, nut shells, grape marc, etc etc)


The rail-mounted rake system manages
the material automatically

Flexible format

VERSION MOUNTED ON CONCRETE WALLS:



- Bunker from 3m to 6m wide and up to 50m long (so up to 1000m^3 per bay)
- Parallel rails are mounted on concrete walls
- Or, for rapid installation, the rails can be mounted on a steel portal frame structure with sandwich panel walls (see next page)

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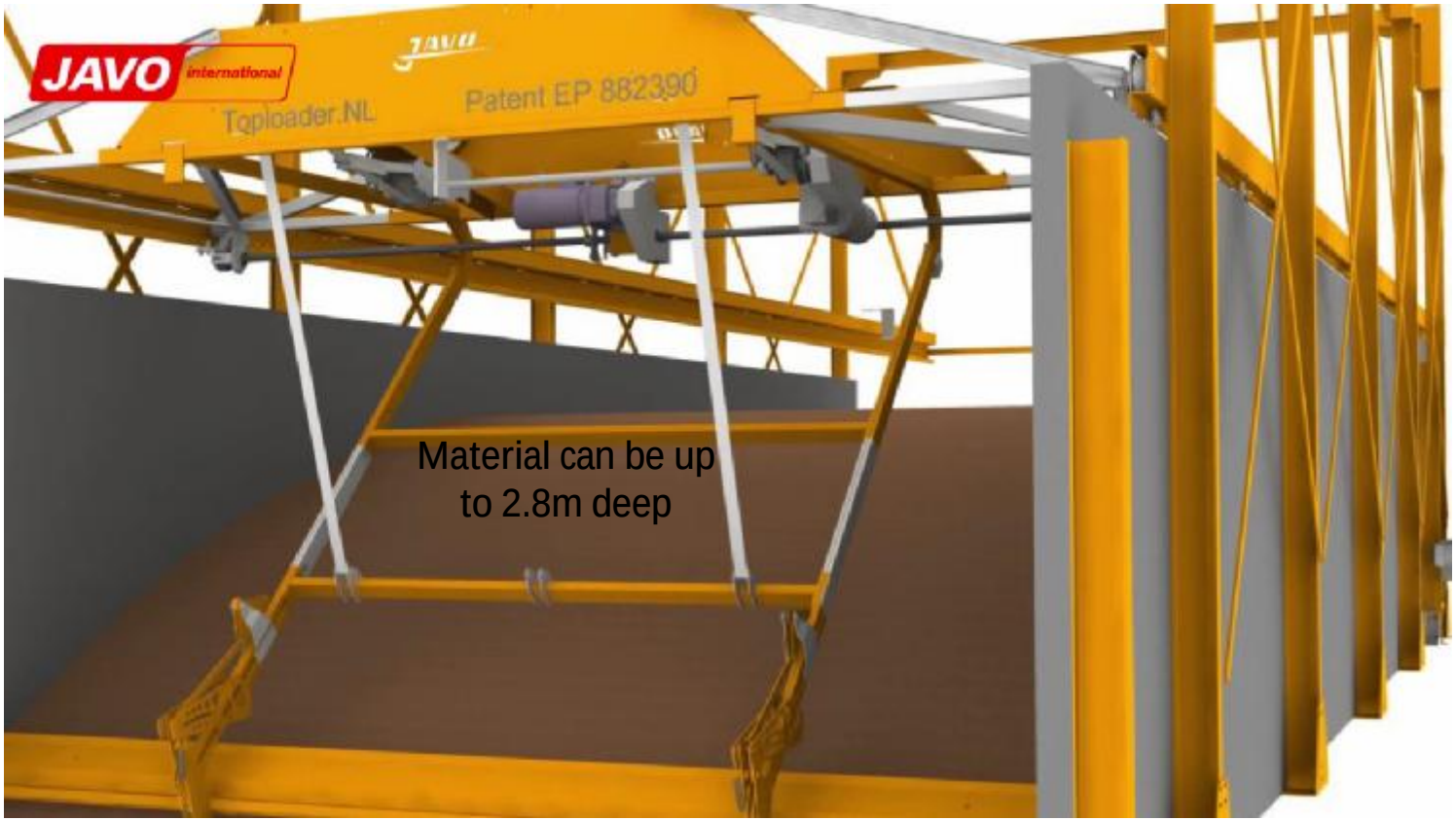

Left : The portal-frame version, showing the steel frame and slide-in walls.

Ideal for feeding 24/7 to a boiler, drier, pelletiser, bagging machine etc.

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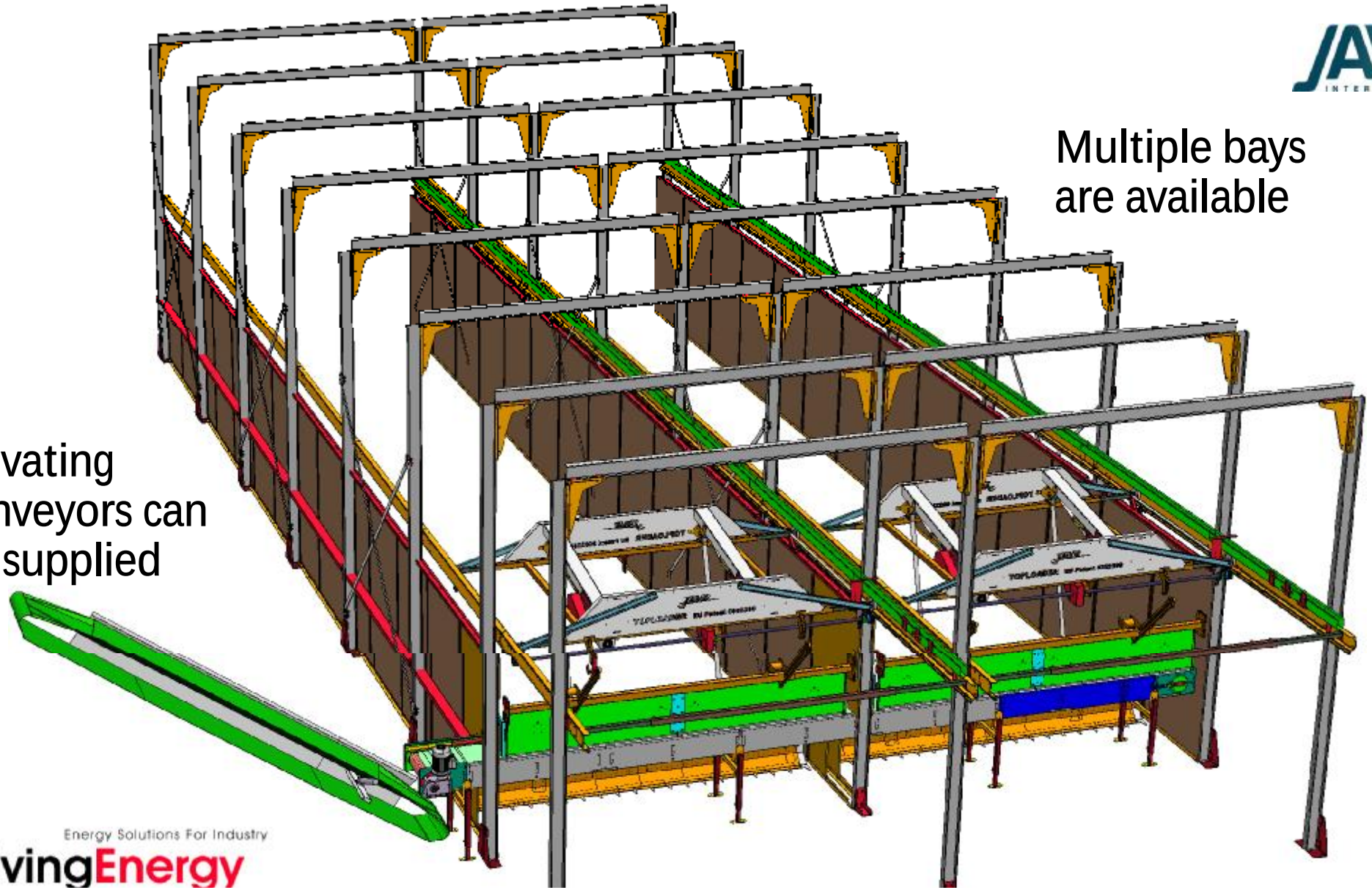

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Toploader Benefits

At the Planning and Installation Phase

1. Performs triple role of reception, storage and material recovery
2. So footprint no larger than competing systems, but much simpler
3. Cost effective : 1000m^3 for less than half conventional systems
4. Low hassle : No detailed design, or complex commercial interfaces
5. No cast-in skid beams or ram anchors, no trenches or suspended walls
6. Portal-frame structure is simply bolted down to a level floor
7. So no floor cutting, excavation, concrete pouring, mud, dirt or dust
8. Simple interface to boiler scope (both controls and physical)
9. Fast install : Each Toploader fuel bay ready to use in about a week

Outcome : A large volume, low cost system

The portal frame is quickly erected – here in a redundant building

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Toploader Benefits

When Operational

1. Large volume (up to 1000m^3/per bay). 4 bays = 4,000m^3
2. So deliveries are less critical. Less stress for user and fuel supplier
3. Equipment is above the fuel, so easily accessed and maintained
4. Only the top layer is moved. Less energy, low wear, low maintenance
5. Only 10-20% of the motor capacity of walking floor systems
6. Never any need to dig out the fuel for maintenance (or blockages)
7. The entry end is automatically scraped clean, ready for the next delivery
8. No post-delivery handling required with loader. Easier, cheaper, safer
9. Auto shut-off if entry is detected, ensures safety
10. Excellent controls data keeps everyone informed (dial-in & text)

Outcome : Low input and low operating costs

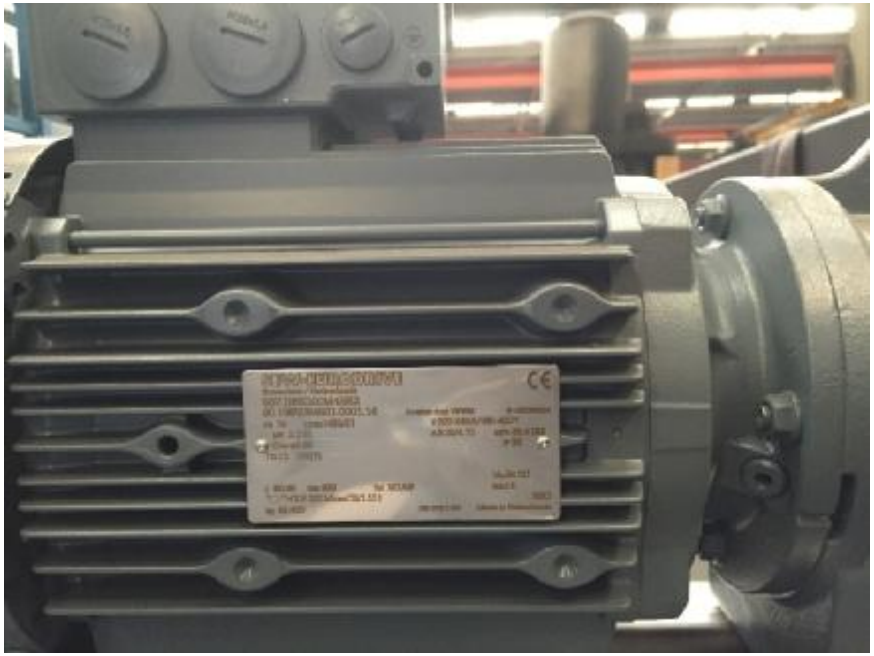
The rake is powered back and forth automatically and the smooth side walls ensure full recovery. Only 2 x 2.2kW motors are required.

Low energy, low maintenance

Replacement parts

Item	Description	Minimum life	Material cost (replacement)
Drive motor	2.2 KW electric motor	10 yrs	500-750 €
Lifting motor	2.2 KW electric motor	10 yrs	500-750 €
Track wheels		8 yrs	450 €
Chain-wheels		8 yrs	170 €

Please note: These parts are not specially designed for the Toploader



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- Length designed to suit the site requirements
- Open air or covered (roof options are available)

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An example of a roof solution
(on the portal-frame version)
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Easy and rapid assembly

Each Toploader bay is ready to use in a week.

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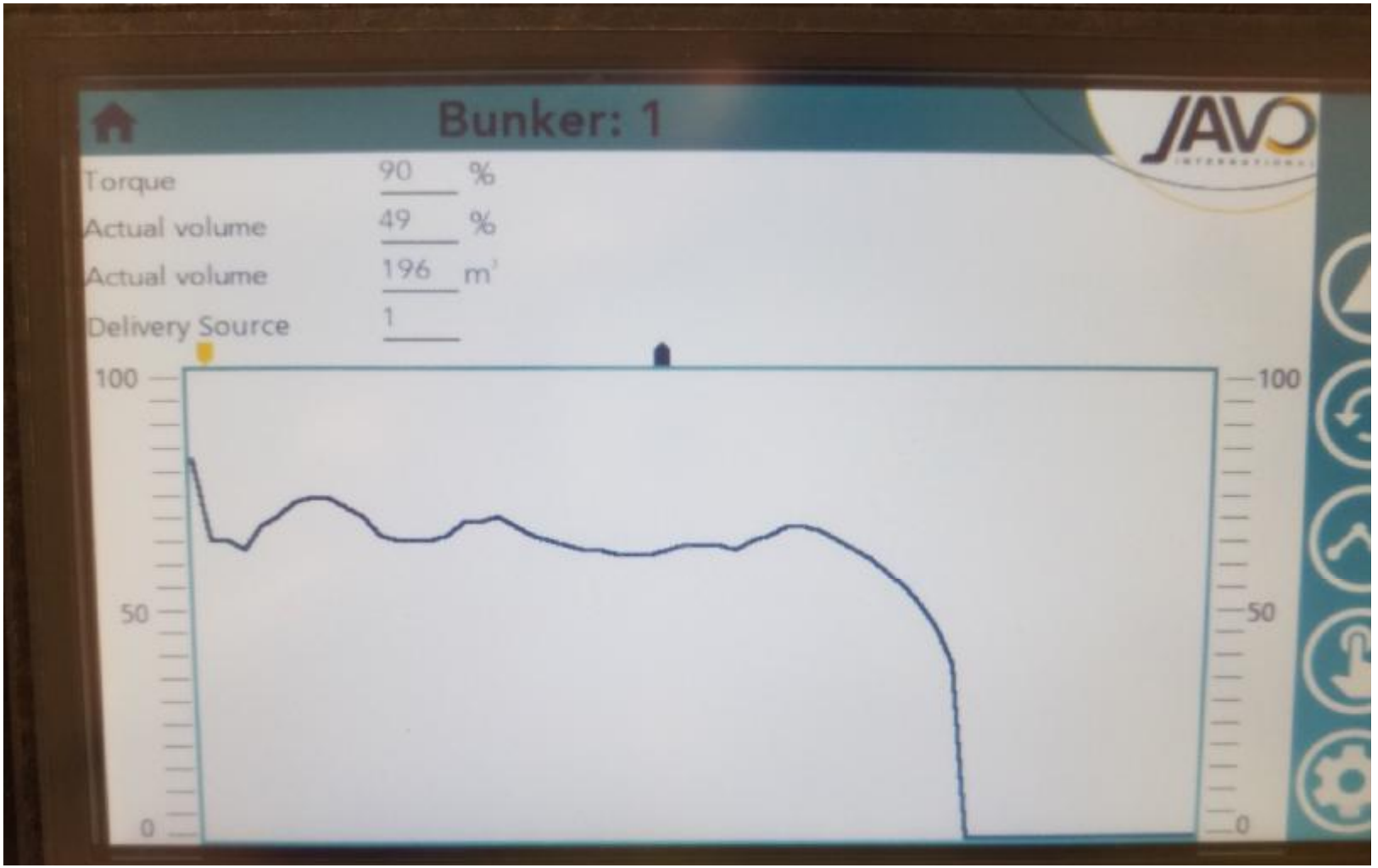
Material detection : After a delivery the recovery rake comes out and scans across the heap with a sonar to see how much material is in the bunker.


The rake automatically moves the material to the discharge end of the bunker, enabling the next delivery without the need for front-end loaders

It is always seeking to maximize the storage area in the bunker. The Toploader screen shows the latest volume. Supplier sees when more can be delivered.




FIFO
function in
action

Statistics

	Day	Hours	Minutes	Seconds	Cycle
Runtime bunker 1	182	9	56	55	680
Runtime bunker 2	132	17	51	36	563
Runtime conveyor	497	12	55	48	176

	1000x km	Kilometer	Meter
Distance bunker 1	0	11	985
Distance bunker 2	0	8	975

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2 versions possible:

Either :

<u>Low cost Civils</u>
Just 2 walls and a level pad required.
No big ram plinths.
No cast-in skid beams.

Or :

Just needs a level pad. Then the ‘portal frame’ version is simply bolted down.


Alternatives involve expensive civils work,
usually with complex suspended walls, as below

No complex civils work is required, such as this plinth for the cast-in hydraulic ram anchor, and the suspended wall for material discharge.


No need for all this reinforcing steel
and large volumes of concrete.....


Cast-in skid beams for the walking floor
need to be laser-levelled to within 1mm

The Toploader avoids these safety issues as well as the extra manhours, diesel and equipment costs….

This loader has nearly been delivered to the boiler overnight (!)

Walking floors can create dust, which can cause issues.

The steel ‘ladders’ are vulnerable to wear, and to rusting caused by the corrosive tannins in some materials.

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Summary of Advantages

1. Performs triple role of reception, storage and material recovery
2. Much reduced civils costs, potentially nil if an existing floor can be used
3. Rapid and easy installation – 1000m^3 in 2 weeks
4. Equipment is above the material, so easily accessed and maintained
5. Never any need to dig out for maintenance or blockages
6. No post-delivery handling required with loader (easier, cheaper, safer)
7. Only the top layer is moved, so less wear, less energy, low maintenance
8. Excellent controls data, keeps everyone informed (via dial-in & text alerts)
9. Lowest possible cost per cubic metre of storage (half of conventional equip'mt)

Goldilocks Result : the lowest installed cost and lowest operating cost

Thank you.

For further information, please contact :

Rob Mallinson
rob.m@livingenergy.co.nz
Mob +64 27 2579001