LELY JUNO
Automatic feed pusher

24/7 fresh roughage with less labour

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innovators in agriculture
Lely Juno feed pusher – 24/7 constant availability of fresh roughage with less labour

It is well known that continuous availability of fresh fodder results in increased dry matter intake and increased milk production. In addition, frequent feeding has a positive impact on general animal health. Quite often, labour is the limiting factor in making fresh feed available to cows around the clock. Thanks to the Lely Juno, this problem is a thing of the past.

The Lely Juno moves along the feeding alley automatically, thereby following the feed fence. When in operation, the machine pushes the feed towards the feed fence without disturbing the cows. Since the Lely Juno is a stand-alone machine, barn modifications are seldom required, and it can be used in almost any type of barn.
Lely Juno 100 and 150
Three years after the successful introduction of the Lely Juno 150, a smaller, more compact and financially more attractive model has been developed: the Lely Juno 100. Because of its smaller diameter, the Juno 100 is also extremely suitable for barns with a smaller feeding alley.

For both models, the charging station serves as the point of departure and arrival for each round; it is installed at a suitable location in the feeding alley. Because of the various built-in sensors, the Lely Juno can drive diverse routes. In combination with pre-installed strips, the Lely Juno 150 can, unlike the Juno 100, also perform routings between two barns, and drive on open feeding alleys.
Lely Juno brings everything together

- Minimal labour, minimal use of energy, minimal maintenance, maximal output.
- A true high-tech solution, creating more flexibility on the farm.
- Improved cow traffic, resulting in less labour and improved animal well-being.
- Smart and flexible, pushing feed consistently.
- Better animal welfare with 24/7 close feed availability.

The benefits of the Lely Juno

24-hour operation and increased feed intake
Constant availability of feed stimulates cow traffic and increases the dry matter intake (+3.5%), especially during the night; in addition, feed residues are reduced.

Improved animal well-being
Fodder pushed up throughout the day improves cow traffic and provides roughage around the clock.

Uniform quality fodder available day and night
The Lely Juno continuously pushes fodder towards the feed fence. The cows are thus given no opportunity to be selective since an equal quantity of roughage is available at the feed fence day and night.

More frequent use of the milking robot
When combined with a milking robot, the Lely Juno has proven that it increases the visiting rate to the robot (+10.9%), day and night. Increased visits result in higher milk production, especially for lower-ranking cows. In addition, the milking robot is used more efficiently and fewer cows appear on the attention lists.

“Now my low-ranked cows also have continuous access to good quality roughage.” Canada
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• Improved feed efficiency.
• Increased robot visits – 10.9% – on robotic dairies.
• Improved milk production, especially from low-ranking cows.
• Increased feed intake.
• No labour, yet pushing 4 times more often.

A quieter herd
Due to the regular pattern of the Lely Juno, low-ranking cows can also access fresh roughage, after the high-ranking cows have had their fill.

Cost savings
Improved feed intake means a reduction of waste fodder. The Lely Juno also saves on work, fuel, and wear and tear of equipment. The Lely Juno is equipped with an energy-efficient electric motor.

Minimal use of energy
The Lely Juno is extremely energy-efficient and has a positive effect on CO₂ emissions. On a yearly basis, a tractor or shovel uses ten times as much energy and emits approximately four times as much CO₂.

Labour-saving and more flexibility
Based on three feed rounds of 10 minutes a day each, the Lely Juno will save you at least 183 hours, i.e. 22 8-hour working days a year! Moreover, the Lely Juno ensures unrivalled flexibility; you can let the Juno push the feed as often and whenever you like, twenty-four hours a day, seven days a week.

“With two cows per feed place the demand for constant feed availability is high. The Lely Juno feed pusher is the solution.” Japan
Features
The Lely Juno is a battery-powered feed pusher, equipped with an energy-efficient electric motor. The rotating surface on the lower part of the Lely Juno pushes the roughage towards the feed fence, as the machine moves in a straight line. A heavy concrete block forms the ‘body’ of the feed pusher ensuring that the machine has sufficient mass to push the fodder. The Lely Juno is suited to all hardened and level feed passages; it can follow various types of feed fences and push fodder with a height of up to 65 cm.

Dynamic pushing
Optimisation of the Lely Juno software, allows to push dynamically. This means that the Juno decides by itself which distance, based on the amount of feed in the feeding alley, it will take to the feeding fence. Smart software also saves you work here! Whatever feeding scheme you choose, the Lely Juno feed pusher takes care of pushing the feed the correct way in every situation.

Safety
The Lely Juno operates in the feeding alley, which is an easily accessible part of the barn, therefore, safety is of paramount importance. Consequently, the feed pusher features a special mechanism: the collision detector. It makes sure that the feed pusher stops as soon as it hits an obstacle.

“We’ve had the Juno for two years and we wouldn’t be without it. It is indispensable and one of the best things we have ever bought.” Northern Ireland
**Technical specifications**

<table>
<thead>
<tr>
<th></th>
<th>Juno 100</th>
<th>Juno 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter (cm)</td>
<td>111</td>
<td>156</td>
</tr>
<tr>
<td>Height (cm)</td>
<td>104</td>
<td>106</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>574</td>
<td>575</td>
</tr>
<tr>
<td>Height (cm) of the push-blade</td>
<td>57</td>
<td>51</td>
</tr>
<tr>
<td>Drive</td>
<td>Electric motor</td>
<td>Electric motor</td>
</tr>
<tr>
<td>Wheels</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Speed (m/min)</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Batteries</td>
<td>12V/55 Ah</td>
<td>12V/55 Ah</td>
</tr>
<tr>
<td>Determination of direction of movement</td>
<td>Gyroscope and ultrasound</td>
<td>Gyroscope and ultrasound</td>
</tr>
<tr>
<td>Determination of distance covered</td>
<td>Sensors on rear wheels plus collision or reset point on the route</td>
<td>Sensors on rear wheels plus inductive sensor</td>
</tr>
<tr>
<td>Number of programmable routes</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Route programming</td>
<td>Use of manual control (E-link)</td>
<td>Use of manual control (E-link)</td>
</tr>
<tr>
<td>Reset points (direction)</td>
<td>Charging station plus collision or reset point on the route</td>
<td>Metal strips; start/end near charging station</td>
</tr>
<tr>
<td>Space required for approaching the charging station (m)</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Space required for departing from the charging station (m)</td>
<td>1.00</td>
<td>1.50</td>
</tr>
<tr>
<td>Minimum width of feed alley (m)</td>
<td>1.25 + width of feed</td>
<td>2.00 + width of feed</td>
</tr>
<tr>
<td>Maximum width of feed mass (cm)</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Maximum height of feed mass (cm)</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>Start interval</td>
<td>Flexible, max. 48 times a day</td>
<td>Flexible, max. 48 times a day</td>
</tr>
<tr>
<td>Charging unit: w x d x h (cm)</td>
<td>28 x 27 x 21</td>
<td>36.90 x 26 x 62.30</td>
</tr>
<tr>
<td>Outdoor use</td>
<td>No</td>
<td>Yes</td>
</tr>
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**Barn specifications**

**Feeding alley:**
- Solid, level concrete floor, with or without coating.
- Limited slope.
- By outside navigation: a higher risk of rutting exists with a roadbed of bitumen in relation with warm or hot temperatures.

**Feeding fence:**
- Vertical bars with maximum intervals of 60 cm.
- Tested: headlocks, horizontal bar, parallel, U-model.
- Horizontal bar at a height between (measured from the feeding alley floor):
  - Juno 100: 80 and 135 cm.
  - Juno 150: 80 and 150 cm.

*) In combination with an optional high level sensor.

"The cows leave less residual feed behind and the feed passage is nice and clean."  
The Netherlands
Since its establishment, Lely has always been committed to improving the quality of life of agricultural entrepreneurs as well as the future of the sector. In addition, the company is innovative in its products as well as its concepts for marketing and distribution.

- Lely is committed to helping farmers ahead of market developments.
- Lely always supplies the most innovative products to farmers and contractors.
- Lely provides customers with optimum customer service.
- Everything Lely invents will always serve to make life easier for the benefit of both man and animal as well as providing joy to all our employees.

In short: we at Lely do our work in order to serve farmers and to make their lives as enjoyable as possible. From grassland machinery to the automatic milking system, Lely thinks with the farmer and has offered him innovative solutions for over 60 years.