Portanova
Customer value is always Buhler’s top priority

Investment promising success
The Portanova offers a high investment return potential in the form of both low operating and maintenance costs as well as high efficiency. Depending on the specific site, the Portanova unloader can also offer an attractive return on investment due to the high degree of mobility and availability as well as its outstanding cost-benefit ratio.

Wide variety of applications
The Portanova offers a quality product portfolio of pneumatic ship unloaders that can be adapted to different applications. A completely self-contained and mobile material unloading system can be easily integrated into fixed conveying systems or directly into rail or road vehicles.

Buhler – your partner
As a global technology group active in the field of grain handling, Buhler supplies everything from individual machines to turnkey systems. As an advisor before investment decisions, a manufacturer of components at its own production sites, an experienced installation and start-up team, and a trainer of customer personnel, Buhler provides reliable, global customer service that ensures dependable operation and high availability of the systems supplied.

Efficient
Reliable
Easy operation
Low maintenance

Customer value and features

Low operating and maintenance costs
• Possibility of lowering the boom to the ground for easy maintenance of the conveying pipes
• Vertically and horizontally telescopic conveying pipes
• Filter with Top-Removal System: fast detection of damaged bags, easy replacement of filter bags
• Direct drive of the rotary blower reduces energy consumption
• Stairs leading up to the machine room, walk-on boom
• Erection rail for fast and easy maintenance of the split special airlock

High availability and reliability
• Rotary blower with constant volumetric flow rate and conveying air velocity ensures uniform material throughput
• Double-jacket suction nozzle, vertically movable and with adjustable air slots, allows high throughputs with various materials
• Programmable logic control system with visualization of operating and fault messages

Low wear
• Conveying pipes with thick walls and pipe elbows with basalt lining
• Filter inlet without pipe elbow, with impact protectors
• Split special airlock with enclosed rotor and wear plates

High mobility
• Can travel on rails or on rubber tires
• Travels easily and quickly around obstacles thanks to selectable steering program

Cover: Portanova 2500/30T in Greece.
Portanova

High mobility and operating reliability

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Introduction

• For over 90 years now, Buhler has been a leading supplier of pneumatic conveying systems for handling bulk materials.
• With its Portanova, Buhler has completed its series of pneumatic ship unloaders. This means that a line of ship unloaders is now available designed to cover the throughput range up to 600 t/h and to serve ship sizes up to 100,000 DWT.

Application

• The Portanova is a self-propelled or stationary ship unloader powered by a diesel or electric drive. The gantry construction supports the slewable upper section.
• The Portanova is preferably applied wherever existing quay facilities do not allow any permanent installations and where the available energy supply is inadequate.
• The Portanova is suitable for unloading dry bulk solids such as cereal grains and oilseeds which are processed in grain mills, feed manufacturing plants, oil mills and breweries.
• Rubber-tired as well as rail-mounted designs are available.

Mode of operation and main elements

The Portanova is a pneumatic ship unloader which draws in the material by air from the ship’s hold. The total separator separates the air from the material, which is transferred via an airlock and a chain conveyor either to the quay conveyor or directly onto road vehicles. A diesel engine powers the direct-coupled rotary piston blower for generating the negative pressure needed for material conveying. A second diesel engine powers the generator, which produces the electric power for all the auxiliary drives and other users. The centralized hydraulic system supplies the energy for lifting and lowering the boom, for slewing the tower, and for driving the traveling gear, including steering. The rubber-tired Portanova with three legs has two steerable wheel pairs on the water side. In the case of the version with four legs, all wheel pairs can be steered, providing a high degree of mobility.

Products

Portanova

Dependable and fast unloading of grain

Technical data

<table>
<thead>
<tr>
<th>Type</th>
<th>2000 kW</th>
<th>220 kW</th>
<th>365 kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughput (max.)</td>
<td>10 t/h</td>
<td>17 t/h</td>
<td>20 t/h</td>
</tr>
<tr>
<td>Rated speed</td>
<td>10 t/h</td>
<td>17 t/h</td>
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<tr>
<td>Nominal capacity</td>
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</tr>
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<tr>
<td>Efficiency</td>
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The performance of Buhler is all-round proven worldwide is supported by an efficient international infrastructure.

Portanova – Pneumatic ship unloader

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Performance

The Portanova has been designed for high mobility and operating reliability. Portanova 2500/60T in Oman.

Technical data

- 92 kW diesel engine
- 220 kW diesel engine
- 365 kW diesel engine
- 84 t
- 105 t
- 13.5 m to 23 m
- 16 m to 28 m
- 14.8 m to 22.4 m
- 16.4 m to 25 m
- 16.4 m to 25 m
- 10^7 or 10^-7 or 10^-7 or 10^-7

Rails (R) Tires (T) Rails (R) Tires (T) Rails (R) Tires (T)

- 30,000 DWT
- 60,000 DWT
- 60,000 DWT
- 290 t/h
- 270 t/h
- 345 t/h
- 2500/30
- 2500/60
- 3000/60
- Size
- Throughput max.
- Recommended ship size
- Traveling gear
- Gantry span (meters)
- Telescopic pipe system, vertical
- Telescopic pipe system, horizontal
- Total weight approx.
- Installed power for blower
- Installed power for auxiliary drives
- Winch for hoisting feeder units
- Control cab for operators
- Loading pipes with dust collection system

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