HENNLICH ENGINEERING is the leading manufacturer of telescopic loading spouts – we have been producing them since 1996. We create customized solutions for your bulk solid loading needs.

Our bulk loading spouts eliminate dust, eradicate material losses and increase safety when working with bulk solids.

**BENEFITS**
- control of dust pollution
- avoidance of penalties imposed by authorities for dust
- increased safety & cleaner environment
- unit assembly construction
- easy maintenance & simple operation
- long durability
- three cable lifting system
- complete range and flow rates

The loading spout is designed with the following parameters:
- product handled
- product physical properties (abrasive, corrosive, explosive, hygroscopic etc.)
- volume of loading capacity
- particle size
- bulk density
- construction dimensions (retracted and extended length)
- temperature (ambient, product)

<table>
<thead>
<tr>
<th>Volume</th>
<th>Flow rate (m³/h)</th>
<th>Design line</th>
<th>Types</th>
<th>Chapter</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>max. 250</td>
<td>Economic</td>
<td>NZU300E</td>
<td>1.1.1.</td>
<td>tankers, railcars</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NZU300VR</td>
<td>1.1.2.</td>
<td>tankers, railcars</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NZUF300E</td>
<td>1.1.3.</td>
<td>tankers, railcars</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NZO300E</td>
<td>2.1.1.</td>
<td>trucks, wagons</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NZOF300E</td>
<td>2.1.2.</td>
<td>trucks, wagons</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NZK300ER</td>
<td>4.1.1.</td>
<td>combined</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NZKF300ER</td>
<td>4.1.2.</td>
<td>combined</td>
</tr>
<tr>
<td></td>
<td>max. 80</td>
<td>Standard</td>
<td>NZU300R</td>
<td>1.2.2.</td>
<td>tankers, railcars</td>
</tr>
<tr>
<td></td>
<td>max. 200</td>
<td>Standard</td>
<td>NZO300S</td>
<td>3.1.1.</td>
<td>stockpile</td>
</tr>
<tr>
<td>middle</td>
<td>max. 300</td>
<td>Standard</td>
<td>NZU300S</td>
<td>1.2.1.</td>
<td>tankers, railcars</td>
</tr>
<tr>
<td></td>
<td>max. 500</td>
<td>Heavy</td>
<td>NZO600H</td>
<td>2.3.1.</td>
<td>trucks, wagons</td>
</tr>
<tr>
<td>high</td>
<td>max. 1000</td>
<td>Heavy</td>
<td>NZO600DH</td>
<td>3.2.1.</td>
<td>stockpile</td>
</tr>
<tr>
<td></td>
<td>max. 2000</td>
<td>Heavy</td>
<td>NZO900DH</td>
<td>3.2.2.</td>
<td>stockpile</td>
</tr>
<tr>
<td></td>
<td>max. 4000</td>
<td>Heavy</td>
<td>NZO800SL</td>
<td>5.1.1.</td>
<td>ship loading</td>
</tr>
</tbody>
</table>
1.1. ECONOMIC LINE
1.1.1. NZU300E

DESCRIPTION
Telescopic loading spout for dust-free loading of dry, dusty bulk solids into tankers.

OPERATION QUALITIES
- Max. flow rate 250 m³/h
- Grain size 0 - 40 mm
- Inlet diameter DN300
- Pipe Ø125 mm for connection to remote dust filtration
- Operating temperature -20 °C / +80 °C
- Motor drive 0.55 kW
- Loading conduit consisting of internal cones and outer bellows

DESIGN
- Electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- Terminal box for cable connection
- Level switch – rotary / vibrating / capacitance type
- Bottom closing cone to prevent any spillage of dust as the loading spout is being raised

ADDITIONAL ACCESSORIES
- Electric control box
- Pendant or remote control
- Vibration unit
- Shut off valves (manual, electro, pneumatic)
- Design for ATEX / non-standard temperature (-40 °C / +250 °C)

<table>
<thead>
<tr>
<th>L&lt;sub&gt;min&lt;/sub&gt; (retracted length)</th>
<th>L&lt;sub&gt;max&lt;/sub&gt; (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>With rotary / capacitance switch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 200</td>
<td>2 700</td>
<td>1 500</td>
<td>137</td>
</tr>
<tr>
<td>1 400</td>
<td>3 900</td>
<td>2 500</td>
<td>161</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L&lt;sub&gt;min&lt;/sub&gt; (retracted length)</th>
<th>L&lt;sub&gt;max&lt;/sub&gt; (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>With vibrating switch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 280</td>
<td>2 780</td>
<td>1 500</td>
<td>139</td>
</tr>
<tr>
<td>1 480</td>
<td>3 980</td>
<td>2 500</td>
<td>163</td>
</tr>
</tbody>
</table>

Telescopic loading spout type NZU300E with the integral closure cone and level indicator guarantees you a dustless loading of dry, dusty bulk solids into the tankers, railway vehicles or containers.
1.1. ECONOMIC LINE
1.1.1. NZU300E

TANKER LOADING SPOUTS
1.1. ECONOMIC LINE

1.1.2. NZU300VR

DESCRIPTION

Telescopic loading spout for dust-free loading of dry, dusty bulk solids into tankers.

OPERATION QUALITIES

- Max. flow rate 250 m³/h
- Grain size 0 - 40 mm
- Inlet diameter DN300
- Pipe Ø125 mm for connection to remote dust filtration
- Operating temperature -20 °C / +80 °C
- Loading conduit consisting of internal cones and outer bellows

DESIGN

- Hand winch for equipment operation
- No level switch
- Sealing cone for perfect tanker sealing

ADDITIONAL ACCESSORIES

- Design for ATEX / non-standard temperature (-40 °C / +250 °C)

<table>
<thead>
<tr>
<th>L_{min} (retracted length)</th>
<th>L_{max} (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>760</td>
<td>1 760</td>
<td>1 000</td>
<td>106</td>
</tr>
<tr>
<td>860</td>
<td>2 360</td>
<td>1 500</td>
<td>118</td>
</tr>
<tr>
<td>960</td>
<td>2 960</td>
<td>2 000</td>
<td>130</td>
</tr>
<tr>
<td>1 060</td>
<td>3 560</td>
<td>2 500</td>
<td>142</td>
</tr>
</tbody>
</table>

Telescopic loading spout type NZU300VR for dustless loading of dry, dusty bulk solids into the tankers, railway vehicles or containers is a simple equipment at the most competitive price.
1.1. ECONOMIC LINE
1.1.2. NZU300VR
1.1. ECONOMIC LINE
1.1.3. NZUF300E

DESCRIPTION

telescopic loading spout for dust-free loading of dry, dusty bulk solids into tankers with built-in filter

OPERATION QUALITIES

• max. flow rate 250 m³/h
• grain size 0-40 mm
• inlet diameter DN300
• operating temperature -20 °C / +80 °C
• motor drive 0.55 kW
• built-in filter: flow rate 900 m³/h, filter area 17.5 m², residual concentration at the output < 10 mg/m³
• internal thread G ½"
• loading conduit consisting of internal cones and outer bellows

DESIGN

• electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
• terminal box for cable connection
• level switch – rotary / vibrating / capacitance type
• bottom closing cone to prevent any spillage of dust as the loading spout is being raised

ADDITIONAL ACCESSORIES

• electric control box
• pendant or remote control
• vibration unit
• shut off valves (manual, electro, pneumatic)
• design for ATEX / non-standard temperature (-40 °C / +250 °C)

<table>
<thead>
<tr>
<th>L_min (retracted length)</th>
<th>L_max (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 500</td>
<td>3 000</td>
<td>1 500</td>
<td>294</td>
</tr>
<tr>
<td>1 570</td>
<td>4 070</td>
<td>2 500</td>
<td>322</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L_min (retracted length)</th>
<th>L_max (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 580</td>
<td>3 080</td>
<td>1 500</td>
<td>296</td>
</tr>
<tr>
<td>1 650</td>
<td>4 150</td>
<td>2 500</td>
<td>324</td>
</tr>
</tbody>
</table>

Telescopic loading spout type NZUF300E with the powerful built-in filter, integral closure cone and level indicator guarantees you a dustless loading of dry, dusty bulk solids into the tankers, railway vehicles or containers.
**DESCRIPTION**

telescopic loading spout for dust-free loading of dry, dusty bulk solids into tankers

**OPERATION QUALITIES**

- max. flow rate 300 m³/h
- grain size 0 - 40 mm
- inlet diameter DN300
- pipe Ø250 mm for connection to remote dust filtration
- operating temperature -20 °C / +80 °C
- motor drive 0.9 kW
- loading conduit consisting of internal cones and outer bellows

**DESIGN**

- electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- terminal box for cable connection
- level switch – rotary / vibrating
- rubber-coated sealing cone for perfect tanker sealing
- bottom closing cone to prevent any spillage of dust as the loading spout is being raised
- available with the external dust collector and double bellows

**ADDITIONAL ACCESSORIES**

- electric control box
- pendant or remote control
- vibration unit
- shut off valves (manual, electro, pneumatic)
- design for ATEX / non-standard temperature (-40 °C / +250 °C)

<table>
<thead>
<tr>
<th>L_{min}</th>
<th>L_{max}</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With rotary switch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 390</td>
<td>2 890</td>
<td>1 500</td>
<td>349</td>
</tr>
<tr>
<td>1 590</td>
<td>4 090</td>
<td>2 500</td>
<td>405</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L_{min}</th>
<th>L_{max}</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With vibrating switch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 500</td>
<td>3 000</td>
<td>1 500</td>
<td>364</td>
</tr>
<tr>
<td>1 700</td>
<td>4 200</td>
<td>2 500</td>
<td>433</td>
</tr>
</tbody>
</table>

Robust-design telescopic loading spout type NZU300S with the integral closure cone and level indicator guarantees you a dustless loading of dry, dusty bulk solids into the tankers, railway vehicles or containers.
DESCRIPTION

 telescopic loading spout with spreader for efficient loading of dry, dusty bulk solids into tankers

OPERATION QUALITIES

• max. flow rate 80 m³/h
• grain size max. 10 mm
• inlet diameter DN300
• operating temperature -20 °C / +80 °C
• gearbox motor drive 0.9 kW
• spreader motor 3 or 7.5 kW
• loading conduit consisting of outer bellows

DESIGN

• electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
• terminal box for cable connection
• level switch – rotary / capacitance type
• rubber-coated sealing cone for perfect tanker sealing
• bottom part is equipped with powerful spreader that spreads the product into tanker

ADDITIONAL ACCESSORIES

• electric control box
• pendant or remote control
• vibration unit
• shut off valves (manual, electro, pneumatic)
• design for ATEX / non-standard temperature (-40 °C / +250 °C)

This unique telescopic loading spout type NZU300R with the powerful spreader guarantees you to load up to 25% more product in comparison with the gravity loading.
1.2. STANDARD LINE
1.2.2. NZU300R

TANKER LOADING SPOUTS

DIVISION HENNLICH ENGINEERING, HENNLICH s.r.o. • Litomerice 412 01, Czech Republic, Tel: 00420 416 711 350 • www.hennlich-engineering.com, e-mail: engineering@hennlich.cz
1.3. TANKER POSITIONER

DESCRIPTION
- unique positioner for flexible positioning of the tanker loading spout above the tanker opening
- ideal when the transport vehicle is not to be moved during the loading

OPERATION QUALITIES
- designed only for positioning in longitudinal axis (X-axis)
- travel path 2 meters (1 meter in each direction)
- loading spout is positioned above the vehicle opening by being moved to the left or to the right
- suitable for the tanker loading spout without dust collector and also with built-in dust collector
- eliminates vehicle re-spotting once in the loading area

DESIGN
It consists of flexible pipe (2365 mm long) and trolley (carbon steel). Inlet pipe DN300 is connected to the customer hopper.

Two covering bellows are included:
Upper bellows DN360 (material Polymar) seals the space between the pipe upper part and the inlet part.
Lower bellows DN408 (material Polymar) seals the space between the pipe bottom part and the trolley.

TROLLEY IS DRIVEN BY THE ELECTRIC GEARBOX:
TYPE: MRT20-FTR
POWER: 1.5 KW, 3.45 A

TROLLEY DIMENSIONS:
LENGTH: 1250 mm
WIDTH: 710 mm
BOTTOM PART INLET: 380 mm

TWO LIMIT SWITCHES TO CONTROL THE TROLLEY MOVEMENT:
TYPE: PIZZATO, FD-531
2.1. ECONOMIC LINE
2.1.1. NZO300E

DESCRIPTION
Telescopic loading spout for dust-free loading of dry, dusty bulk solids on trucks and railcars.

OPERATION QUALITIES
- max. flow rate 250 m³/h
- grain size 0-80 mm
- inlet diameter DN300
- pipe Ø125 mm for connection to remote dust filtration
- operating temperature -20 °C / +80 °C
- motor drive 0.55 kW
- loading conduit consisting of internal cones and outer bellows

DESIGN
- electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- terminal box for cable connection
- level switch – rotary / vibrating
- dustproof bell with rubber skirt at the lower end of the loading spout
- available also with manual winch

ADDITIONAL ACCESSORIES
- electric control box
- pendant or remote control
- vibration unit
- shut off valves (manual, electro, pneumatic)
- design for ATEX / non-standard temperature (-40 °C/+250 °C)

<table>
<thead>
<tr>
<th>L_{min} (retracted length)</th>
<th>L_{max} (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 300</td>
<td>3 300</td>
<td>2 000</td>
<td>145</td>
</tr>
<tr>
<td>1 400</td>
<td>3 900</td>
<td>2 500</td>
<td>156</td>
</tr>
<tr>
<td>1 500</td>
<td>4 500</td>
<td>3 000</td>
<td>167</td>
</tr>
<tr>
<td>1 700</td>
<td>5 700</td>
<td>4 000</td>
<td>189</td>
</tr>
</tbody>
</table>

Telescopic loading spout type NZO300E with the dustproof bell, rubber skirt and level indicator guarantees you a dustless loading of dry, dusty bulk solids on open trucks and railway cars.
2.1. ECONOMIC LINE
2.1.1. NZO300E

TRUCK/RAILCAR LOADING SPOUTS
DESCRIPTION

telescopic loading spout for dust-free loading of dry, dusty bulk solids on trucks and railcars

OPERATION QUALITIES

- max. flow rate 250 m³/h
- grain size 0-80 mm
- inlet diameter DN300
- operating temperature -20 °C / +80 °C
- motor drive 0.55 kW
- built-in filter: flow rate 900 m³/h, filter area 17.5 m², residual concentration at the output < 10 mg/m³
- internal thread G ½"
- loading conduit consisting of internal cones and outer bellows

DESIGN

- electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- terminal box for cable connection
- level switch – rotary / vibrating
- dustproof bell with rubber skirt at the lower end of the loading spout
- available also with manual winch

ADDITIONAL ACCESSORIES

- electric control box
- pendant or remote control
- vibration unit
- shut off valves (manual, electro, pneumatic)
- design for ATEX / non-standard temperature (-40 °C/+250 °C)

<table>
<thead>
<tr>
<th>L_{min} (retracted length)</th>
<th>L_{max} (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 850</td>
<td>3 850</td>
<td>2 000</td>
<td>330</td>
</tr>
<tr>
<td>1 950</td>
<td>4 450</td>
<td>2 500</td>
<td>343</td>
</tr>
<tr>
<td>2 050</td>
<td>5 050</td>
<td>3 000</td>
<td>356</td>
</tr>
</tbody>
</table>

Telescopic loading spout type NZOF300E with the powerful built-in filter, dustproof bell with rubber skirt and level indicator guarantees you a dustless loading of dry, dusty bulk solids on trucks or railway cars.
2.1. ECONOMIC LINE
2.1.2. NZOF300E

TRUCK/RAILCAR LOADING SPOUTS
DESCRIPTION

telescopic loading spout for dust-free loading of dry, dusty bulk solids on trucks and railcars

OPERATION QUALITIES

- inlet diameter DN400
- max. flow rate 400 m³/h
- grain size 0-100 mm
- pipe for connection to remote dust filtration
- operating temperature -20 °C / +80 °C
- motor drive 0.9 kW
- loading conduit consisting of internal tubes and outer bellows

DESIGN

- electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- terminal box for cable connection
- level switch – rotary / vibrating
- dustproof bell with rubber skirt at the lower end of the loading spout

ADDITIONAL ACCESSORIES

- electric control box
- pendant or remote control
- vibration unit
- shut off valves (manual, electro, pneumatic)
- design for ATEX / non-standard temperature (-40 °C/+250 °C)

<table>
<thead>
<tr>
<th>L_{min} (retracted length)</th>
<th>L_{max} (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 400</td>
<td>3 900</td>
<td>2 500</td>
<td>531</td>
</tr>
<tr>
<td>1 700</td>
<td>4 500</td>
<td>3 000</td>
<td>484</td>
</tr>
<tr>
<td>1 800</td>
<td>5 320</td>
<td>3 520</td>
<td>529</td>
</tr>
<tr>
<td>2 150</td>
<td>6 350</td>
<td>4 200</td>
<td>628</td>
</tr>
</tbody>
</table>
2.2. STANDARD LINE

2.2.1. NZO400S

TRUCK/RAILCAR LOADING SPOUTS
DESCRIPTION

Telescopic loading spout for dust-free loading of dry, dusty bulk solids on trucks and railcars.

OPERATION QUALITIES

- Max. flow rate 500 m³/h
- Grain size 0-100 mm
- Inlet diameter DN600
- Pipe for connection to remote dust filtration
- Operating temperature -20 °C / +80 °C
- Motor drive 2.2 kW
- Loading conduit consisting of internal tubes and outer bellows

DESIGN

- Electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- Terminal box for cable connection
- Level switch – 2x rotary
- Dustproof bell with rubber skirt at the lower end of the loading spout

ADDITIONAL ACCESSORIES

- Electric control box
- Shut off valves (manual, electro, pneumatic)
- Design for ATEX / non-standard temperature (-40 °C / +250 °C)

<table>
<thead>
<tr>
<th>L_{min} (retracted length)</th>
<th>L_{max} (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 940</td>
<td>3 635</td>
<td>1 695</td>
<td>631</td>
</tr>
<tr>
<td>2 160</td>
<td>4 729</td>
<td>2 569</td>
<td>704</td>
</tr>
<tr>
<td>2 490</td>
<td>6 150</td>
<td>3 660</td>
<td>823</td>
</tr>
<tr>
<td>2 600</td>
<td>6 700</td>
<td>4 100</td>
<td>906</td>
</tr>
</tbody>
</table>

Robust-design telescopic loading spout type NZO600H with the dustproof bell, rubber skirt and level indicator guarantees you a dustless loading of dry, dusty bulk solids on trucks or railway cars.
TRUCK/RAILCAR LOADING SPOUTS

2.3. HEAVY LINE

2.3.1. NZO600H

DIVISION HENNLICH ENGINEERING

DIVISION HENNLICH ENGINEERING, HENNLICH s.r.o. • Litomerice 412 01, Czech Republic, Tel: 00420 416 711 350 • www.hennlich-engineering.com, e-mail: engineering@hennlich.cz
### 3.1. STANDARD LINE

#### 3.1.1. NZO300S

**DESCRIPTION**

Telescopic loading spout for dust-free loading of dry, dusty bulk solids on stockpiles.

**OPERATION QUALITIES**

- Inlet diameter DN300
- max. flow rate 250 m³/h
- grain size 0-50 mm
- pipe for connection to remote dust filtration
- operating temperature -20 °C / +80 °C
- motor drive 1,6 kW
- loading conduit consisting of internal tubes and outer bellows

**DESIGN**

- electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- terminal box for cable connection
- level switch – 2x rotary
- dustproof bell with rubber skirt at the lower end of the loading spout

**ADDITIONAL ACCESSORIES**

- electric control box
- shut off valves (manual, electro, pneumatic)
- design for ATEX / non-standard temperature (-40 °C / +250 °C)

**Specifications**

<table>
<thead>
<tr>
<th>L&lt;sub&gt;min&lt;/sub&gt; (retracted length)</th>
<th>L&lt;sub&gt;max&lt;/sub&gt; (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 360</td>
<td>8 000</td>
<td>5 640</td>
<td>776</td>
</tr>
<tr>
<td>2 500</td>
<td>10 000</td>
<td>7 500</td>
<td>900</td>
</tr>
<tr>
<td>2 780</td>
<td>11 986</td>
<td>9 206</td>
<td>930</td>
</tr>
<tr>
<td>2 890</td>
<td>14 000</td>
<td>11 110</td>
<td>1 013</td>
</tr>
</tbody>
</table>

Telescopic loading spout type NZO300S with the dustproof bell, rubber skirt and level indicator guarantees you a dustless loading of dry, dusty bulk solids on stockpiles and ships.
3.1. STANDARD LINE
3.1.1. NZO300S

STOCKPILES LOADING SPOUTS
3.2. HEAVY LINE

3.2.1. NZO600DH

DESCRIPTION

telescopic loading spout for dust-free loading of dry, dusty bulk solids on stockpiles

OPERATION QUALITIES

• inlet diameter DN600
• max. flow rate approx. 1000 m$^3$/h
• grain size 0-100 mm
• pipe for connection to remote dust filtration
• operating temperature -20 °C / +80 °C
• motor drive 3 or 4 kW
• loading conduit consisting of internal tubes and outer bellows

DESIGN

• electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
• terminal box for cable connection
• level switch – 2x rotary
• dustproof bell with rubber skirt at the lower end of the loading spout

ADDITIONAL ACCESSORIES

• electric control box
• design for ATEX / non-standard temperature (-40°C/+250°C)
• external dust collector

<table>
<thead>
<tr>
<th>$L_{\text{min}}$ (retracted length)</th>
<th>$L_{\text{max}}$ (extracted length)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 050</td>
<td>13 250</td>
<td>10 200</td>
<td>2 300</td>
</tr>
<tr>
<td>3 100</td>
<td>14 325</td>
<td>11 225</td>
<td>2 334</td>
</tr>
<tr>
<td>3 444</td>
<td>17 881</td>
<td>14 437</td>
<td>3 100</td>
</tr>
</tbody>
</table>

Robust-design telescopic loading spout type NZO600DH with the dustproof bell, rubber skirt and level indicator guarantees you a dustless loading of dry, dusty bulk solids on stockpiles or ships.
3.2. HEAVY LINE

3.2.2. NZO900DH

DESCRIPTION

Telescopic loading spout for dust-free loading of dry, dusty bulk solids on stockpiles.

OPERATION QUALITIES

- max. flow rate 2000 m³/h
- grain size 0-400 mm
- inlet diameter DN900
- operating temperature -20 °C / +80 °C
- motor drive 5.5 / 7.5 / 9.2 / 11.0 kW
- loading conduit consisting of tubes

DESIGN

- Electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- Terminal box for cable connection
- Level switch – 4x tilt type
- Dustproof bell with rubber skirt at the lower end of the loading spout

ADDITIONAL ACCESSORIES

- Electric control box
- Design for ATEX / non-standard temperature (-40°C/+250°C)

<table>
<thead>
<tr>
<th>L_min</th>
<th>L_max</th>
<th>Travel</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 350</td>
<td>9 808</td>
<td>6 458</td>
<td>3 370</td>
</tr>
<tr>
<td>4 300</td>
<td>14 580</td>
<td>10 280</td>
<td>4 450</td>
</tr>
<tr>
<td>4 500</td>
<td>15 750</td>
<td>11 250</td>
<td>4 630</td>
</tr>
<tr>
<td>4 900</td>
<td>17 075</td>
<td>12 175</td>
<td>4 780</td>
</tr>
<tr>
<td>5 160</td>
<td>19 133</td>
<td>13 973</td>
<td>5 065</td>
</tr>
<tr>
<td>5 440</td>
<td>21 614</td>
<td>16 174</td>
<td>5 380</td>
</tr>
</tbody>
</table>

Robust-design telescopic loading spout type NZO900DH with the dustproof bell, rubber skirt and four level indicators guarantees you a dustless loading of dry, dusty bulk solids on stockpiles or ships.
3.2. HEAVY LINE
3.2.2. NZO900DH

STOCKPILES LOADING SPOUTS
4.1. ECONOMIC LINE

4.1.1. NZK300ER

**DESCRIPTION**
telescopic loading spout for dust-free loading of dry, dusty bulk solids into trucks, railcars and tankers

**OPERATION QUALITIES**
- max. flow rate 250 m³/h
- grain size 0-40 mm
- inlet diameter DN300
- pipe Ø125 mm for connection to remote dust filtration
- operating temperature -20 °C / +80 °C
- motor drive 0.55 kW
- loading conduit consisting of internal cones and outer bellows

**DESIGN**
- electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- terminal box for cable connection
- level switch – vibrating / capacitance type
- bottom part consisting of sealing cone and dustproof bell with rubber skirt
- available also with electrical lifting of the dustproof bell

**ADDITIONAL ACCESSORIES**
- electric control box
- pendant or remote control
- vibration unit
- shut off valves (manual, electro, pneumatic)
- design for ATEX / non-standard temperature (-40 °C / +250 °C)

<table>
<thead>
<tr>
<th>L&lt;sub&gt;min&lt;/sub&gt; (retracted length)</th>
<th>L&lt;sub&gt;max&lt;/sub&gt; (extracted length)</th>
<th>L&lt;sub&gt;max&lt;/sub&gt; (extracted length for open loading)</th>
<th>Travel (H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 005</td>
<td>3 255</td>
<td>3 781</td>
<td>2 250</td>
<td>131</td>
</tr>
<tr>
<td>1 200</td>
<td>3 700</td>
<td>4 084</td>
<td>2 500</td>
<td>181</td>
</tr>
<tr>
<td>1 400</td>
<td>4 900</td>
<td>5 260</td>
<td>3 500</td>
<td>200</td>
</tr>
<tr>
<td>1 700</td>
<td>5 700</td>
<td>5 884</td>
<td>4 000</td>
<td>222</td>
</tr>
</tbody>
</table>

Combined telescopic loading spout type NZK300ER for dustless loading of dry, dusty bulk solids into closed tankers, railway vehicles and open trucks or railway cars.
4.1. ECONOMIC LINE
4.1.1. NZK300ER
**DESCRIPTION**
telescopic loading spout for dust-free loading of dry, dusty bulk solids into trucks, railcars and tankers

**OPERATION QUALITIES**
- max. flow rate 250 m³/h
- grain size 0-40 mm
- inlet diameter DN300
- built-in filter: flow rate 900 m³/h, filter area 17.5 m², residual concentration at the output < 10 mg/m³
- operating temperature -20 °C / +80 °C
- motor drive 0.55 kW
- loading conduit consisting of internal cones and outer bellows

**DESIGN**
- electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- terminal box for cable connection
- level switch – vibrating / capacitance type
- bottom part consisting of sealing cone and dustproof bell with rubber skirt
- available also with electrical lifting of the dustproof bell

**ADDITIONAL ACCESSORIES**
- electric control box
- pendant or remote control
- vibration unit
- shut off valves (manual, electro, pneumatic)
- design for ATEX / non-standard temperature (-40 °C / +250 °C)

<table>
<thead>
<tr>
<th>L_{min}</th>
<th>L_{max}</th>
<th>L_{max} (extracted length for open loading)</th>
<th>Travel (H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(retracted length)</td>
<td>(extracted length)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 900</td>
<td>3 400</td>
<td>3 790</td>
<td>1 500</td>
</tr>
<tr>
<td>1 970</td>
<td>4 470</td>
<td>4 860</td>
<td>2 500</td>
</tr>
<tr>
<td>2 070</td>
<td>5 070</td>
<td>5 460</td>
<td>3 000</td>
</tr>
</tbody>
</table>

Combined telescopic loading spout type NZKF300ER with powerful built-in filter guarantees you a dustless loading of dry, dusty bulk solids into closed tankers, railway vehicles and open trucks or railway cars.
4.1. ECONOMIC LINE
4.1.2. NZKF300ER

COMBINED LOADING SPOUTS
5.1. HEAVY LINE
5.1.1. NZO800SL

DESCRIPTION
Telescopic loading spout for dust-free loading of dry, dusty bulk solids on ships.

OPERATION QUALITIES
- Max. flow rate: 4000 m³/h
- Grain size: 0-80 mm
- Inlet diameter: DN800
- Operating temperature: -20 °C / +80 °C
- Motor drive: 5.5 / 7.5 / 15.0 / 22.0 kW
- Loading conduit consisting of tubes

DESIGN
- Electric winch with limit switches for highest and lowest position, emergency sensors for highest and lowest positions
- Terminal box for cable connection
- Level switch – 4x tilt type
- Special rotary shovel at the end of the spout for an effective material distribution into the ship

ADDITIONAL ACCESSORIES
- Inner lining of tubes and shovel (Tivar88, PE UHMW etc.)
- Protection cage
- Pivoting mechanism

<table>
<thead>
<tr>
<th>L_{\text{min}} (retracted length)</th>
<th>L_{\text{max}} (extracted length)</th>
<th>Travel (H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 000</td>
<td>8 800</td>
<td>4 800</td>
</tr>
<tr>
<td>5 000</td>
<td>12 000</td>
<td>7 000</td>
</tr>
<tr>
<td>6 000</td>
<td>16 000</td>
<td>10 000</td>
</tr>
<tr>
<td>8 000</td>
<td>20 000</td>
<td>12 000</td>
</tr>
</tbody>
</table>

Telescopic loading spout type NZO800SL with the distribution shovel for the high-capacity ship loading. Large cargo loading in a short time.
SHIP LOADING SPOUTS

5.1. HEAVY LINE

5.1.1. NZO800SL

[Diagram of NZO800SL ship loading spouts]