



# Top Loading



## Loading Systems

Top Loading Systems

Bottom Loading Systems

Folding Stairways

# Know how & consulting directly from manufacturer with decades of experience

That's why you choose... The logo for IGATEC International. It features the word 'IGA' in a large, bold, sans-serif font, followed by 'International' in a smaller, blue, sans-serif font. Below 'IGA' is a horizontal line, and to the right of this line is the word 'TEC' in a large, bold, sans-serif font.

- **Radial gaskets**  
Allow a maximum of feasible sealing materials and longer lifetime compared to axial gaskets
- **DUPLEX, SUPERDUPLEX, HASTELLOY, ALUMINIUM...**  
We machine all compatible materials
- **ASME, NACE, NORSOK, DIN...**  
We manufacture according to all required guidelines and directives
- **Customized connections**
- **IGATEC Swivel Joints**  
Made of carbon steel (e.g. St52-3, ...) are nitrided to reach maximized hardness of surface and optimized corrosion protection at the same time
- **Certifications**  
TA-Luft  
VdS  
ISO 9001:2008

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## Top Loading Systems



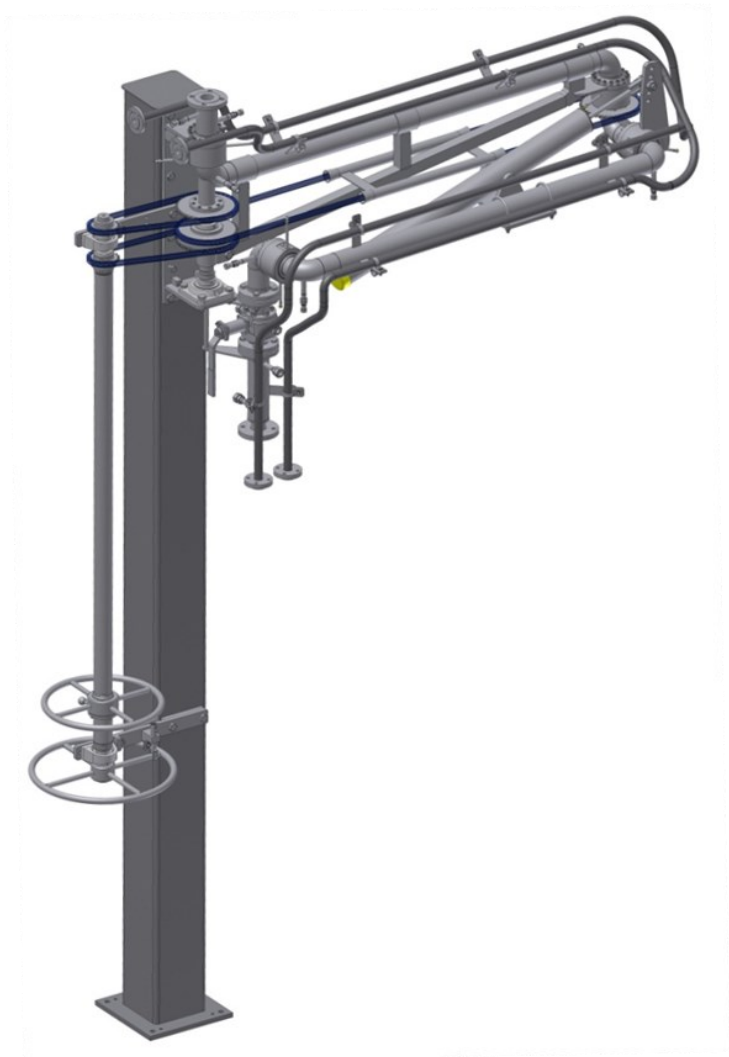
**IGATEC Top Loading Systems** are used for the safe and fast loading and unloading of railcars, road tankers, sedimentation tanks, trailers and any other suitable tanks from above.

Providing an appropriate choice of materials and components the loading of almost every liquid and gaseous fluid (mostly from chemical or petrochemical industry) is feasible.

**IGATEC Top Loading Systems** are characterized by a wide working range and high flexibility. Accurate positioning of vehicles is not necessary. Vehicles with different heights can be served by the same loading arm.

**Top Loading Systems** are normally operated from an operator platform. Folding stairs allow safe walking on vehicles.

The loading arms are connected to a pillar or beam (or similar) which is designed for that.





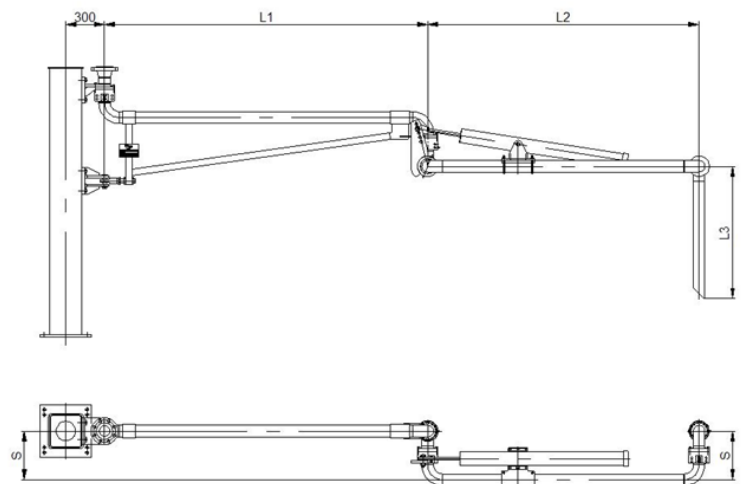
## Top Loading Systems



After loading procedure the loading arms can be fixed in idle position by a safety notch. The easy use of **IGATEC Loading Systems** is guaranteed by integrated weight balancing systems. The operating stuff is able to move and position the system with very small effort.

The connecting interface of the loading arm to the vehicles to be filled depends on the needed requirements for vehicle and products to be loaded.

The configuration of **IGATEC Top Loading Systems** is always according to customers' demands.



## Top Loading Systems

### Dimensions:

Nominal diameter	DN25 / 1" bis DN150 / 6"
Working pressure	<b>Vacuum up to 40 bar / 580 psi</b>
Working temperature	-60°C up to 250°C / <b>-76°F up to 482°F</b>
Material	<ul style="list-style-type: none"> <li>• Standard (1.4571, 25CrMo4)</li> <li>• Stainless steel</li> <li>• C-steel</li> <li>• Low temp. steel</li> <li>• PTFE</li> </ul>
Control system	<ul style="list-style-type: none"> <li>• Manually</li> <li>• Pneumatically</li> <li>• Hydraulically</li> <li>• Electrically</li> </ul>
Control functions	<ul style="list-style-type: none"> <li>• Lift / sink</li> <li>• Pressing</li> <li>• Telescopic pipe up / down</li> <li>• Bottom contact</li> <li>• Gate valve open / closed ⇒ Electrically ⇒ Pneumatically</li> <li>• Pivoting L1 right / left</li> <li>• Pivoting L2 right / left</li> <li>• Automatically, SPS</li> </ul>
Weight balance	<ul style="list-style-type: none"> <li>• Without auxiliary energy ⇒ Balance weight ⇒ Spring cylinder ⇒ Pneumatic cylinder ⇒ Gashydraulic torque compensation</li> <li>• Auxiliary energy operated ⇒ Pneumatic cylinder ⇒ Hydraulic cylinder ⇒ Electrically operated</li> <li>• Combined weight balancing with / without auxiliary energy</li> <li>• <b>Special accessoires:</b> manually operated fixing unit</li> </ul>
Gate valves	<ul style="list-style-type: none"> <li>• Manually operated</li> <li>• Pneumatically operated</li> <li>• Electrically operated</li> </ul>
Overfill protection	<ul style="list-style-type: none"> <li>• Vibration principle (liquiphant)</li> <li>• Pneumatically (blubber)</li> <li>• Capacitive sensor</li> <li>• Height adjustable</li> </ul>

By combining different dimensions (see table left) **IGATEC Top Loading Systems** can be configured for nearly every liquid and gaseous fluid.

Furthermore optional features (see table below) can be added to the loading system.

### Optional Features:

Vapor return line	<ul style="list-style-type: none"> <li>• Vapor return arm</li> <li>• Vapor return hose</li> <li>• Parallel arm</li> </ul>
PTFE-lining	
Type of heating	<ul style="list-style-type: none"> <li>• 100% double jacket, incl. swivel joints</li> <li>• Double jacket, tubes and elbows only</li> <li>• Double jacket, tubes only</li> <li>• Electrically</li> </ul>
Heating fluids	<ul style="list-style-type: none"> <li>• Hot water</li> <li>• Steam</li> <li>• Thermal oil</li> </ul>
Piggable	
Drop pipe	<ul style="list-style-type: none"> <li>• Flanged connection</li> <li>• 45°- drop pipe spout</li> <li>• Y-deflector</li> <li>• T-deflector</li> <li>• <b>Special accessoires</b> ⇒ Telescopic pipe ⇒ Drop pipe with internal valve ⇒ Sieve ⇒ Dry coupling</li> </ul>
Dome interface (Anschluss an das Transportmittel)	<ul style="list-style-type: none"> <li>• Clamp</li> <li>• Cover plate</li> <li>• Coated cone</li> <li>• Inflatable sealing cushion</li> </ul>

<b>Special accessoires</b>	<ul style="list-style-type: none"> <li>• „Deadman“ control</li> <li>• Vacuum breaker</li> <li>• Earthing control system</li> <li>• Dry coupling</li> </ul>
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## TOP SPOT® Loading Systems

**TOP SPOT®** and **New On Spot Loading Systems** represent cutting edge technology of fully automated loading arms.

**TOP SPOT® Loading Arms** combine the properties of the wellknown

- On Spot (high loading performance) with
- Top Loading (high flexibility, mobility and working range)

to a maximum functional device.

This new loading technology is patented by **IGATEC** and has been successfully launched in Russia.

**TOP SPOT® Loading Systems** are designed for high loading capacities (10.000.000 t/year) into railcars. Railcar loading is operating fully automated.

Furthermore our equipment is designed for extreme environments and weather conditions. Particularly the Russian Federation requires equipment designed for deepest temperatures down to minus 55°C.



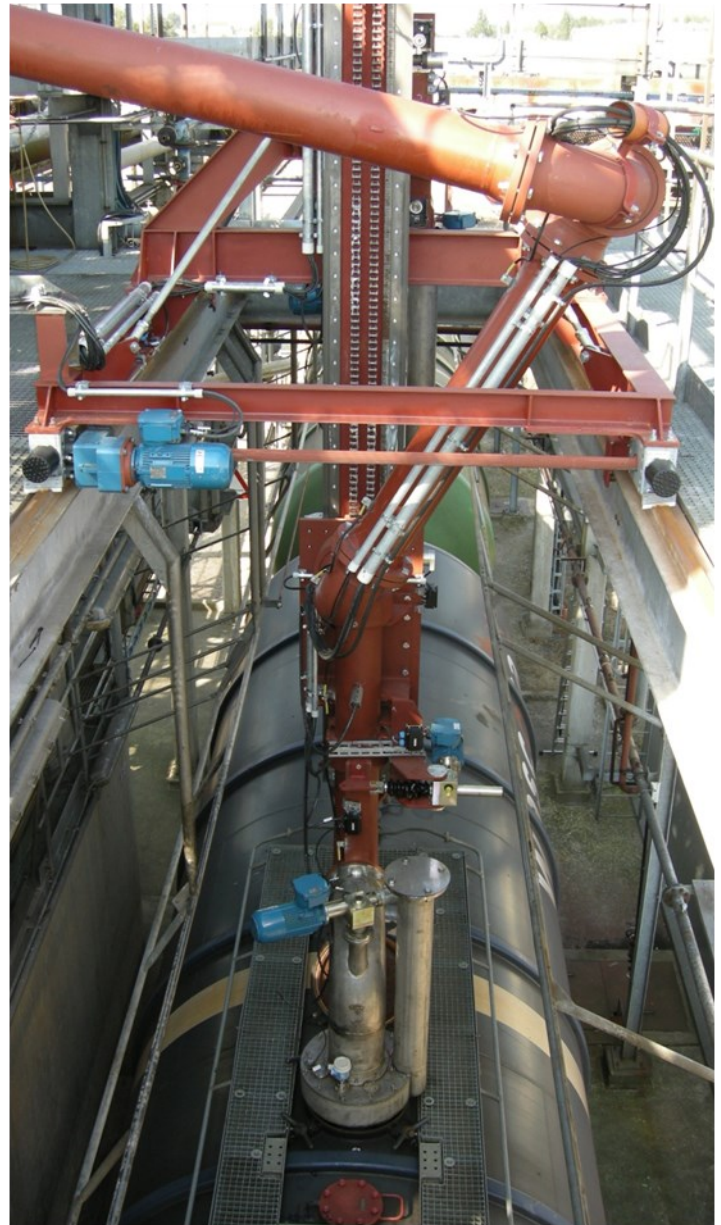


## New On Spot Loading Systems

**TOP SPOT®** and **New On Spot Loading Systems** represent cutting edge technology of fully automated loading arms.

Our fully automated **New On Spot Loading System** is the result of the advancement of regular hydraulically On Spot systems.

**New On Spot Loading Systems** are designed for high loading capacities (10.000.000 t/year) into railcars. Railcar loading is operated fully automated.



Furthermore our equipment is designed for extreme environments and weather conditions. Particularly the Russian Federation requires equipment designed for deepest temperatures down to minus 55°C.