VERHOEF EQUIPMENT MEETS CUSTOMER REQUIREMENTS AND LOCAL CONDITIONS

During the years Verhoef has developed three different designs. Each design can be fine tuned to be in line with the site data and range of ship load levels and meet any other customer specific requirements.

- Column type
- Tower type
- Riding type

THE MAIN FEATURES OF THE VERHOEF ACCESS SYSTEMS

- Standard systems adaptable to meet specific requirements
- Fully automatic ‘free-wheel’ system which allows the telescopic gangway to accommodate ship- and tidal movements (up/down, in/out and slewing horizontally)
- Telescopic gangways with self-levelling steps or fixed anti-slip walking surface
- Optional control panel which make the gangway easy to operate
- Explosion proof electrical systems
- Hazardous area safety requirements
- Optional: stores cranes, control cabinets, fire monitors (either mounted on top or as a separate unit)

LIFETIME EXTENSION AND PROGRAMMES FOR UPGRADING

Verhoef also offers lifetime extension including upgrading of existing gangway equipment. Please contact us for further information.

GLOBAL STANDARD IN DESIGN AND FABRICATION OF
GANGWAY SYSTEMS

CUSTOMER FOCUSED-SOLUTIONS DRIVEN

In order to make a proposal for you, we would need the following information:

1. Height of jettydeck above L.A.T.
2. Maximum tankerdeck level above jettydeck
3. Lowest tankerdeck level below jettydeck
4. Distance between jettydeck and tanker
5. Drift dimensions a. longitudinally direction b. cross direction
6. Additional requirements (please specify) like firemonitor foundation, crane etc.

QUESTIONNAIRE

VERHOEF ACCESS TECHNOLOGY

GLOBAL STANDARD IN SHIP TO SHORE ACCESS SYSTEMS FOR LNG AND PETROCHEMICAL TERMINALS

DESIGN | FABRICATION | MAINTENANCE & REPAIR | LIFETIME EXTENSION PROGRAMMES
HISTORY OF AUTOMATIC GANGWAY TOWERS
In 1966 the first Verhoef Automatic Gangway Tower was manufactured for BP Petrofina. Nowadays its design is still recognised as the global and pending standard for safe and reliable connection between shore and ship. Since then Verhoef Access Technology has gained a worldwide reputation with the design and manufacture of more than 600 gangways, in use at LNG and Petrochemical Terminals in 57 countries.

COLUMN TYPE
The column type has a telescopic gangway with a turnable platform at a fixed height. This is the most popular design for reaching ship deck levels up to an elevation of about 15 meters/50 feet, vertical range.

TOWER TYPE
The tower type has a telescopic gangway that moves vertically along the tower by means of an elevator system. As a result, the gangway tower can cover all ranges of ship deck levels, in combination with the ship movements (tidal, loading/unloading, drifts etc). Once the gangway has been positioned on the ship's deck, the elevator platform will go automatically to the next level, when the maximum range of the gangway is reached. Prior to this movement an alarm will alert all personnel to clear the gangway.

VERHOEF GANGWAY SYSTEMS - PROVEN TRACK RECORDS
TOWER TYPE
- Statoil Mongstad (Norway) – Gangway tower supplied in 1973, still in operation today!
- First Verhoef Gangway Tower, delivered to BP Angle Bay (U.K.) in 1966.
- Vopak Europoort (The Netherlands) – First columns with telescopic gangways, supplied in 1968 – have been in daily use ever since!
- Darwin – Australia
  - Column system with fire monitor on top, located at the far end of the jetty.
- Jubail – Saudi Arabia
  - Column system in combination with hydraulic stores crane.
- Lake Charles – USA
  - Fully covered telescopic gangway, Iron ore jetty.
- Cape Lambert - Australia
  - Column on separate piler next to the jetty.
- Augusta - Italy
  - Column system and separate hose handling crane.
- Nanhai - China
  - Covered gangway towers to withstand the extreme cold in Hammerfest, Norway

COLUMN TYPE
- Vopak Europoort (The Netherlands) – First columns with telescopic gangways, supplied in 1968 – have been in daily use ever since!
- First Verhoef Gangway Tower, delivered to BP Angle Bay (U.K.) in 1966.
- Column system with cabin and additional top part for a fire monitor.
- Column system with additional top part for the jetty."
HISTORY OF AUTOMATIC GANGWAY TOWERS

In 1966 the first Verhoef Automatic Gangway Tower was manufactured for BP Petroleum. Nowadays its design is still recognised as the global and leading standard for a safe and reliable connection between shore and ship.

Since then Verhoef Access Technology has gained a worldwide reputation with the design and manufacture of more than 600 gangways, in use at 700 and petrochemical terminals in 57 countries.

The column type has a telescopic gangway with a turnable platform at a fixed height. This is the most popular design for reaching ship deck levels up to an extension of about 15 meters/50 feet, vertical range.

The tower type has a telescopic gangway that moves vertically along the tower by means of an elevator system. As a result, the gangway tower can cover all ranges of ship deck levels, in combination with the ship movements (tidal, loading/unloading, drifts etc.). Once the gangway has been positioned on the ship deck, the elevator platform will go automatically to the next level, when the maximum range of the gangway is reached. Prior the movement an alarm will alert all personnel to clear the gangway.

VERHOEF GANGWAY SYSTEMS - PROVEN TRACK RECORDS

**COLUMN TYPE**
- Statoil Mongstad (Norway) – Gangway tower supplied in 1973, after 30 years still in operation today!
- First Verhoef Gangway Tower, delivered to BP Angle Bay (U.K.) in 1966.
- Vopak Europoort (The Netherlands) – First columns with telescopic gangways, supplied in 1968 – have been in daily use ever since!
- Darwin – Australia: Column system with cabin and additional top part for a fire monitor.
- Jubail – Saudi Arabia: Column system in combination with hydraulic stores crane.
- Cape Lambert – Australia: Column system on separate piler next to the jetty.
- Augusta - Italy: Column system and separate hose handling crane.
- Nanhai - China: All Verhoef gangway towers are equipped with illumination on all platforms.
- Novorossiysk – Russia: Covered gangway towers to withstand the extreme cold in Hammerfest, Norway.
- All deck ladders are electrically isolated by means of nylon wheels and rubber fenders to avoid sparks when being positioned on the ships deck.
- Bonny Island - Nigeria: Multipurpose gangway tower also supporting an IDASAT, cabins and fire monitor.
- Sullom Voe – Shetland Islands: Basic tower type with telescopic gangway in stowed position.
- Guandong - China: Vertical gangway envelope. Separate stores crane and fire monitor column.

**TOWER TYPE**
- First Vertical Gangway Tower, delivered to BP Angle Bay (U.K.) in 1966.
- Darvespan System with hydraulic stores crane and modification.”
HISTORY OF AUTOMATIC GANGWAY TOWERS
In 1966 the first Verhoef Automatic Gangway Tower was manufactured for BP Petroleum. Nowadays its design is still recognized as the global and leading standard for a safe and reliable connection between shore and ship.

Since then Verhoef Access Technology has gained a worldwide reputation with the design and manufacture of more than 600 gangways, in use at 300 and Petrochemical Terminals in 57 countries.

**Column Type**
- A telescopic gangway with a turnable platform at a fixed height.
- This is the most popular design for reaching ship deck levels up to a maximum of about 15 meters/50 feet, vertical range.

**Tower Type**
- The tower type has a telescopic gangway that moves vertically along the tower by means of an elevator system. As a result, the gangway tower can cover all ranges of ship deck levels, in combination with the ship movements (tidal, loading/unloading, drifts, etc.)
- Once the gangway has been positioned on the ships deck, the elevator platform will go automatically to the next level, when the maximum range of the gangway is reached. Prior to this movement an alarm will alert all personnel to clear the gangway.

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### PROVEN TRACK RECORDS - TOWER TYPE

- **Statoil Mongstad** (Norway) – Gangway tower supplied in 1973, still in operation today!
- **First Verhoef Gangway Tower**, delivered to BP Angle Bay (U.K.) in 1966.
- **Vopak Europoort** (The Netherlands) – First columns with telescopic gangways, supplied in 1968 – in daily use ever since!
- **Darwin** – Australia (Column system with fire monitor on top, located at the far end of the jetty)
- **Jubail** – Saudi Arabia (Column system in combination with a hydraulic stores crane)
- **Lake Charles** – USA (Fully covered telescopic gangway, iron ore jetty)
- **Cape Lambert** – Australia (Column on separate piler next to the jetty)
- **Augusta** – Italy (Column system and separate hose handling crane)
- **Nanhai** – China (Column system with cabin and additional top part for a fire monitor)
- **Novorossiysk** – Russia (Covered gangway towers to withstand the extreme cold in Hammerfest, Norway)
- **Bonny Island** – Nigeria (Multipurpose gangway tower also supporting an IDASAT, cabins and fire monitor)
- **Sullom Voe** – Shetland Islands (Basic tower type with telescopic gangway in stowed position)
- **Guangdong** – China (Vertical gangway envelope, separate stores crane and fire monitor column)
- **Singapore** (Horizontal gangway envelope, our deck ladder requires only limited space on the ships deck)
- **Gangway Tower (height 35 meter)**, designed for ships up to 500.000 DWT.
- **M.O.T. Europoort** – The Netherlands (we are proud to mention that a large number of international oil and gas companies have given us the confidence to supply them with Verhoef gangway systems, in more than 57 countries:)

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### PROVEN TRACK RECORDS - COLUMN TYPE

- **Vopak Europoort** (The Netherlands) – First columns with telescopic gangways, supplied in 1968 – in daily use ever since!
- **First Verhoef Gangway Tower**, delivered to BP Angle Bay (U.K.) in 1966.
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- **Novorossiysk** – Russia (Covered gangway towers to withstand the extreme cold in Hammerfest, Norway)
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- **Gangway Tower (height 35 meter)**, designed for ships up to 500.000 DWT.
Verhoef Access Technology meets customer requirements and local conditions

During the years, Verhoef has developed three different designs. Each design can be fine tuned to be in line with the site data and ranges of ship data levels and meet any other customer specific requirements.

Below, there are three main designs:

- Column type
- Tower type
- Riding type

The main features of the Verhoef access systems:

- Standard systems adaptable to meet customer requirements
- Fully automatic ‘free-wheel’ system which allows the telescopic gangway to accommodate ship and/or tidal movements (up/down, in/out and slewing horizontally)
- Telescopic gangways with self-levelling steps or fixed anti-slip walking surface
- Telescopic control panel which makes the gangway easy to operate
- Explosion-proof electrical systems
- Proven design, carried out in high grade steel and aluminium
- Optional: stores crane, control cabin, fire monitors (either mounted on top or as a separate unit)

Customer focused solutions driven

In order to make a proposal for you, we would need the following information:

1. Height of jettydeck above L.A.T.
2. Maximum tankerdeck level above jettydeck
3. Lowest tankerdeck level below jettydeck
4. Distance between jettydeck and tanker
5. Drift dimensions a. longitudinally direction b. cross direction
6. Additional requirements (please specify) like firemonitor foundation, crane etc.

Lifetime extension and upgrating programmes

Verhoef also offers lifetime extension including upgrading of existing gangway equipment. Please contact us for further information.
VERHOEF ACCESS TECHNOLOGY MEETS CUSTOMER REQUIREMENTS AND LOCAL CONDITIONS

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- Optional control panel which makes the gangway easy to operate
- Explosion-proof electrical systems
- Proven design, carried out in high grade steel and aluminium
- Optional: stores cranes, control cabins, fire monitors (either mounted on top or as a separate unit)

CUSTOMER FOCUSED - SOLUTIONS DRIVEN

In order to make a proposal for you, we would need the following information:
1. Height of jettydeck above L.A.T.
2. Maximum tankerdeck level above jettydeck
3. Lowest tankerdeck level below jettydeck
4. Distance between jettydeck and tanker
5. Drift dimensions a. longitudinally direction
   b. cross direction
6. Additional requirements (please specify) like firemonitor foundation, crane etc.

LIFETIME EXTENSION AND PROGRAMMES FOR UPGRADE

Verhoef also offers lifetime extension including operating or repairing the equipment. Please contact us for more information.

GLOBAL STANDARD IN DESIGN AND FABRICATION OF GANGWAY SYSTEMS

VERHOEF ACCESS TECHNOLOGY is a registered trade name of VERHOEF ALUMINIUM SCHEEPSBOUW INDUSTRIE BV