

VIKING Evacuation Chute Product Guide



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VIKING LIFE-SAVING EQUIPMENT A/S

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Welcome to the VIKING advantage

When you choose VIKING life-saving equipment you choose a sound long term investment. VIKING is an innovator in life-saving systems and has more than four decades of experience in supplying first class equipment to the passenger and cruise sector.

We offer a choice of product packages and systems that are standard or tailor made, and certified to the latest requirements of all international standards. Our product scope ranges from top of the line latest innovations to standard and basic options.

Unique easy to handle mass evacuation systems (MES) for all vessel types and sizes.

Every second is critical when abandoning ship at sea. Getting the maximum number of passengers and crew safely evacuated in the minimum amount of time is the priority.

It is essential that high capacity life-saving equipment is easy to handle by the minimum of crew to ensure safe and rapid evacuation of all on board.

VIKING's advanced evacuation systems provide fast and easy evacuation, exceptional stability and are trusted by passengers and crew worldwide.



Truly global network

The unique VIKING network of subsidiaries, agents and 270 authorised servicing stations, make us a truly global provider offering cost-effective and convenient service when and where you need it.

VIKING Evacuation Chute

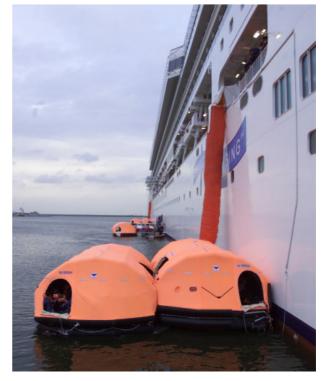
The VIKING Evacuation Chute, or VEC, is designed to enable passengers and crew to quickly and safely board liferafts directly from onboard ship.

Proven fast, stable evacuation

The VIKING evacuation chute has been subjected to exhaustive trials onshore and at sea in extreme climates and in rough sea conditions at least equivalent to SOLAS condition 3 metre significant waves. This advanced evacuation system has proven to be an exceptionally stable dry shod system providing rapid and safe evacuation directly into liferafts.

Passenger protection

The reinforced Kevlar evacuation chute provides a safe descent path and compensates for ship and sea movement so that evacuation is not obstructed. This system has the additional advantage of protecting evacuees from environmental hazards, such as severe weather conditions, during evacuation and is fitted with a protective cover.



The system's flexible capacity can be adapted to suit any vessel requirement.

Activation

The VEC system is activated by pulling on the release handle. The nitrogen (N_2) pressured cylinder launches the liferafts on their sledge, which pulls out the chute. Their descent is controlled by an automatic hydraulic brake winch.

The evacuation chute is pre-connected to the liferafts and is automatically pulled into

evacuation position when the liferafts are inflated.

The VEC system and the launch do not require any external power supply.

Additional protection for arctic regions

An additional tarpaulin cover to protect against over icing is available for vessels sailing in arctic regions.

Mass evacuation systems

Flexible installation

The system is self-contained and compact, which means that it can be installed anywhere onboard; on open deck, between decks in an open recess, or built into the ship's side with a spray tight cover in front.

Installation heights are from 5 to 20m above waterline*.

Requires few trained crew members

The evacuation chute is developed, engineered and manufactured to comply with the latest international legislation for safety and complies with international marine safety regulations.

It is simple to operate and requires few trained crew members.

Special features

- Evacuates 367 people within 30 minutes, or 196 people within 17 min 40 sec
- Flexible and stable, even in very rough seas
- Simple to operate
- Passive, self-launching system requiring no further action once the handle is pulled
- Requires few crew members
- Is available in a wide range of variants
- Flexible installation and capacity
- Can be used in combination with a wide range of different liferaft types
- Complies with all international regulations
- Thoroughly tested according to international regulations
- * Calculated from lightest sea condition to installation deck.



The VEC system can be fitted in an open recess, on open deck or into the ship's side.

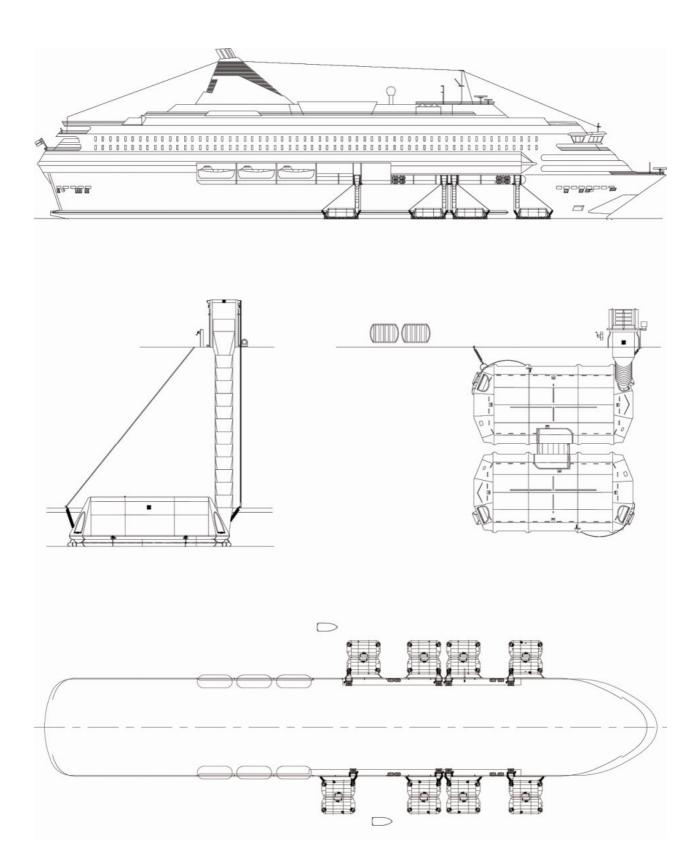


The chute system is easy to operate and requires few trained crew members.



The chute and liferafts can be removed as separate units for servicing. The A-frame remains in position.

Tecnical description



VEC System Type 2.2/2.3

1 x 101 and 1 x 51 person liferaft with A pack or B pack

The system can be built into an open recess on the vessel's side or installed free on deck. The system can be installed free on deck without any additional covering.

System type 2.2 is installed with a B pack in the 101 person liferaft and an A pack in the 51 person liferaft.

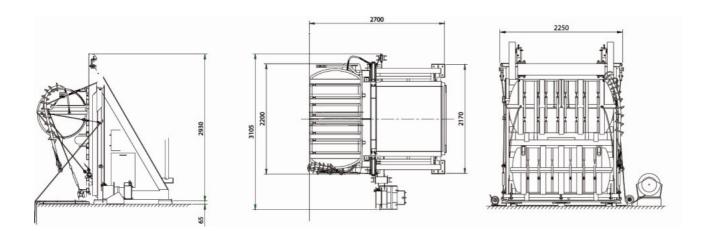
System type 2.3 is installed with a B pack in both the 101 person and the 51 person liferaft.

Dimensions

Length:	2250 mm
Height:	2930 mm
Depth:	2700 mm
Weight:	2400 kg







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VEC System Type 2.5

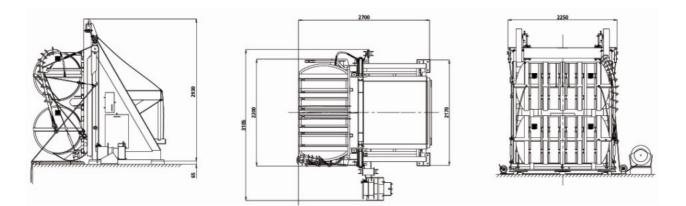
2 x 101 person liferafts with B pack

The system can be built into an open recess on the vessel's side or installed free on deck. The system can be installed free on deck without any additional covering.

Length:	2250 mm
Height:	2930 mm
Depth:	2700 mm
Weight:	2700 kg







VEC System Type 2.4 Built in

2 x 101 person liferafts with B pack

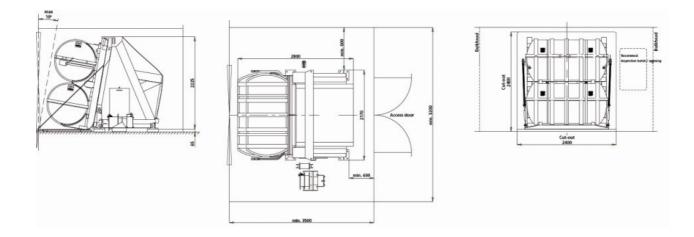
The Type 2.4 system is designed to be built into the vessel's side, but can also be installed free on deck. The system can be installed free on deck without any additional covering.

System type 2.4 includes 2 x 101 person liferafts, both containing B packs.

Length:	2170 mm
Height:	2225 mm
Depth:	2800 mm
Weight:	2550 kg







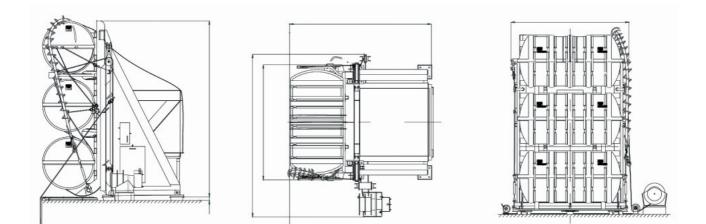
VEC System Type 3.3 With 3 x 101 liferafts (B pack).

3 x 101 person liferafts with B pack

The system can be built into an open recess on the vessel's side or installed free on deck. The system can be installed free on deck without any additional covering.

System type 3.3 includes 3 x 101 person liferafts, all containing B packs.

Length:	2250 mm
Height:	3365 mm
Depth:	2700 mm
Weight:	3300 kg



VEC System Type 3.2

3 x 101 person liferafts with A pack

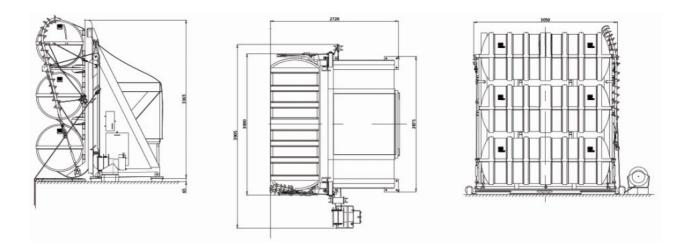
The system can be built into an open recess on the vessel's side or installed free on deck. The system can be installed free on deck without any additional covering.

System type 3.2 includes 3 x 101 person liferafts, all containing A packs.

Length:	3000 mm
Height:	3365 mm
Depth:	2720 mm
Weight:	4400 kg







Fully deployed within two minutes

The system is activated by pulling on the handle. The chute and liferaft sledge are automatically deployed quickly and safely. The descending sledge pulls the chute box into the correct position for the following deployment steps.



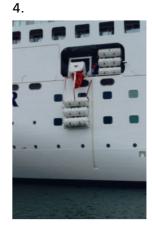
 Deploy the VEC system by simply pulling the handle.



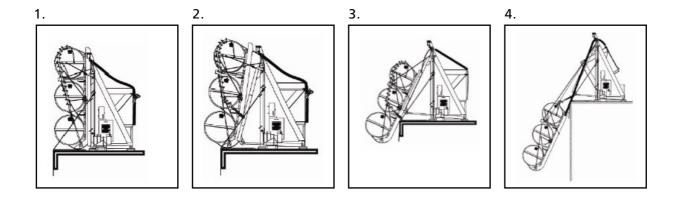
 The liferaft sledge is Nitrogen (N₂) activated.



3. The liferaft sledge is automatically launched in a controlled manner.



4. The weight of the sledge automatically tilts the chute box.



System in action

The sledge continues to pull the chute out of the chute box and into position. The sledge sinks in the water, automatically inflating the liferafts. During the final stage, the chute is pulled into the inflated liferaft, ready for evacuation to being. The entire process takes just two minutes.



5. The weight of the sledge pulls the chute out of the box.



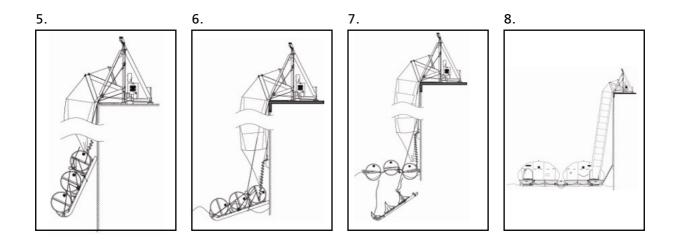
6. The sledge and the liferafts reach the water.



 The sledge sinks away, automatically releasing the liferafts by pulling the lines.



8. The chute is automatically pulled into the inflated liferaft.



System

Bowsing winches





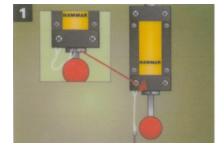
Bowsing winches are used to bowse the chute liferafts into position in relation to the ship's side. The winch and bowsing line ensure that the liferafts remain stable alongside the ship and are not moved out of position by the movement of the waves.

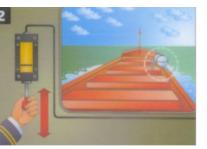
VIKING systems use Andersen Winches. In situations where every second counts, these lightweight stainless steel winches allow for rapid pay in of the line. Vertical ribs on the drum provide extra grip on the bowsing line, meaning that the winch needs turning fewer times.

The highly polished surface minimises the risk of jamming. The bowsing line slides easily up the self tailing drum, constantly pushed up by the following rope wind.

The spring loaded locking system in the handle means that the winch can be easily operated with one hand.

Remote liferaft release





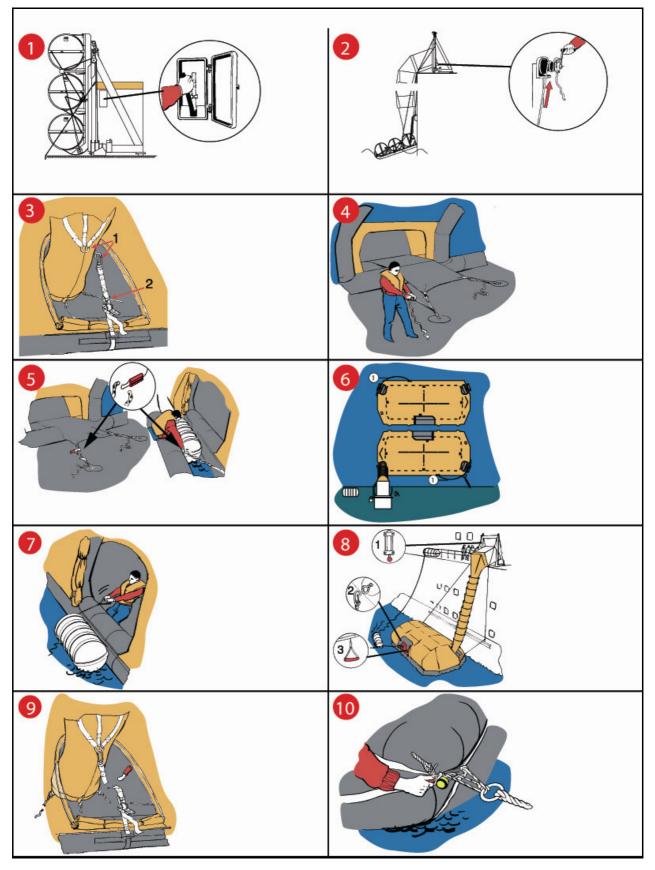


Remote release systems allow liferaft containers to be stored far away from the MES system. They can be stored on racks anywhere on deck, in otherwise inaccessible locations, for example. The liferafts can be remotely released when required and are immediately ready to operate.

VIKING systems use Hammar Manual Remote Release Systems (MRRS) to remotely release the liferafts for connection to the slide platform. Pumping on the release system pump creates a vacuum which in turn activates the hydrostatic release unit. A sharp stainless steel knife within the unit cuts through the rope that holds the liferaft in place.

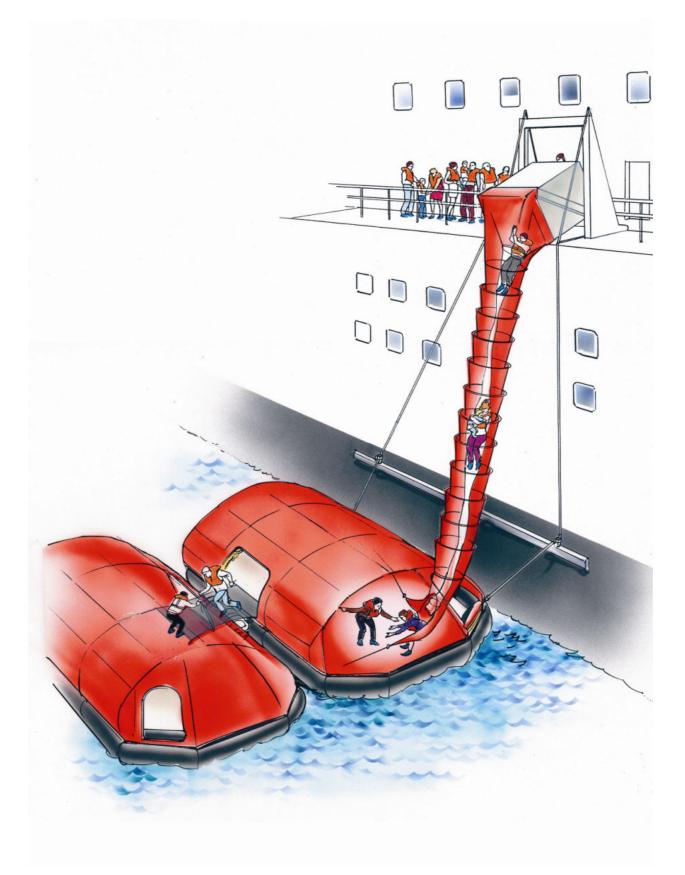
The MRRS system is an effective and reliable method of releasing liferafts from their storage rack.

System in action



Clear and easy to understand instruction posters are affixed the system and/or on the nearby bulkhead.

System in action

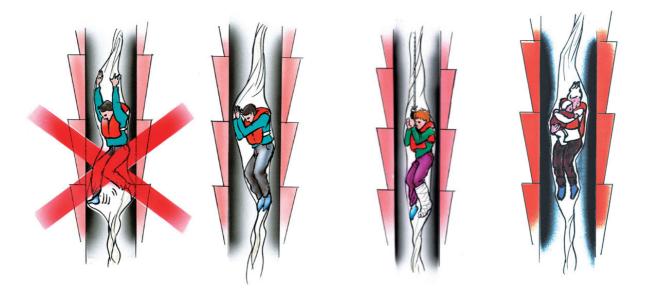


The VEC system provides safe and rapid evacuation directly into liferafts, and protects evacuees from environmental hazards, such as severe weather conditions.

Controlled descent



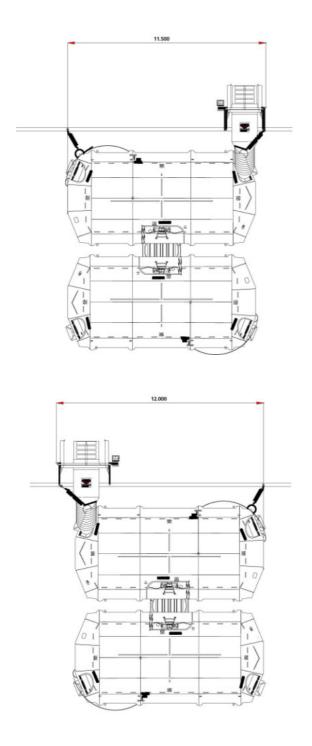
Access through the chute stowage box.



Controlled and protected descent to the liferafts. The passive descent technique does not require special training of crew or passengers.

Chute and liferaft combinations

Chute evacuation systems can be tailor made to suit your individual needs. Here are some examples of how they can be set up.



Single chute evacuation, A or B pack. Liferaft capacities: 51 or 101 people. Evacuation capacities: 367 people in 30 minutes

Liferafts by VIKING

VIKING's liferafts are found all over the globe - from the arctic to the tropics.

VIKING's liferafts are available in a standard version and a top of the line automatically selfrighting version. VIKING's proven self-righting liferafts ensure that no matter how the liferaft lands in the water it will always right itself ready for boarding. All liferafts are equipped with a hydrostatic release unit that makes it release automatically under water if it has not been released manually.

Liferafts are subjected to rough sea trials and deployed at extremely low temperatures. Selfrighting liferafts are also tested for automatic self-righting.

Evacuation system liferafts

The wide range of liferaft types suitable for use with the chute system ensures that the VIKING evacuation chute system is flexible and suitable for all types of passenger carrying vessels. Suitable liferafts include:

- 25 and 51 person canopied liferafts
- 25, 51 and 101 person self-righting liferafts
- 25, 51 and 101 person open reversible liferafts

Standard features

- Equipped with emergency packs and additional liferaft equipment according to SOLAS requirements
- Provided with at least two individual buoyancy compartments. If one of the compartments is damaged, there will be sufficient buoyancy to carry the specified number of passengers
- Stored in a rigid fibreglass container for durability
- Installed onboard either on cradles and racks, or stacked on top of each other
- Average lifespan is 18-20 years



Mass Evacuation Systems by VIKING

VIKING mass evacuation systems are designed to evacuate passengers and crew as quickly and as safely as possible.

VIKING can provide tailor made or standard mass evacuation to suit the individual customer requirement. The wide range of evacuation chutes, mini chutes and slides means that VIKING is unique in providing evacuation systems to suit every type and size of vessel.

The VIKING Evacuation Mini Chute (VEMC)

This system can be used by vessels with embarkation heights from 5–20m. It was originally designed for small and medium sized vessels and its flexible design means that it can be used even by larger vessels. The Mini Chute is similar to the VEC in evacuation performance. It has a pre-incorporated 101 person liferaft and can evacuate 356 people in 30 minutes.



The VIKING Evacuation Slide (VES)

The slide is a stable, efficient dry shod evacuation system that can evacuate over 500 people in 30 minutes. It can be tailor made to suit all types of vessels and is available with self-righting 25, 51 or 101 person liferaft combinations. The 30° angle between slide and ship absorbs the movement of the sea and means that the system can be installed at extreme forward and aft positions. The slide is fitted with ropes that allow for access up the slide, making it also a means of rescue.



The VIKING Evacuation Mini Slide (VEMS)

This system is designed for small vessels operating in any sea condition. It is available with either a 101 man open reversible liferaft for vessels operating in sheltered waters or a SOLAS compliant 101 man selfrighting canopied liferaft for vessels operating at sea.

It is compact, packed in a container the size of a standard liferaft container, simple to operate and fully operational within 2 minutes. The VEMS can evacuate 303 people in 17 minutes and 40 seconds.



Mass Evacuation Systems by VIKING

Davit launched liferafts (DKF, DKFS)

Davit launched liferafts are designed to be inflated and boarded at deck level, and then lowered into the water. They are available as selfrighting canopied liferafts or standard canopied liferafts. They are designed to carry 12, 25, 35 or 39 people and are an effective means of dry shod evacuation and can be either an alternative to chute or slide systems or a supplement.

Direct boarding liferafts (DKS, DKR)

Direct boarding liferafts are typically used on board small passenger ferries. They are available either as open reversible large capacity liferafts or as self-righting canopied liferafts. Both types are available in 25, 51, 101, and 150 person sizes.

They are mounted on racks on board ship and normally released from their cradles with a remote release system. They are then bowsed to the ship for direct evacuation from the deck to the liferaft.

Throw overboard liferafts

Throw-overboard liferafts are designed to be dropped overboard in their container and inflated in the water.

Self-righting rafts are available in six sizes; for 25, 51, 101 and 150 people. Standard canopied rafts are available in seven sizes; 6, 8, 10, 12, 16, 20, 25, 35 and 51 people. Open reversible liferafts, for use in sheltered waters are available for: 6, 12, 20, 25, 51, 101 and 150 people.

Liferafts with capacities of 25 and above can be used as supplementary liferafts to all VIKING mass evacuation systems.

VIKING's advanced evacuation systems provide fast and easy evacuation, exceptional stability and are trusted by passengers and crew worldwide.







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Certificates

Certificates



About VIKING

VIKING is a market leader in maritime safety, providing essential safety equipment for passenger & cargo vessels, offshore installations, defence and fire fighting, fishing and yachting vessels.



Our international headquarters in Denmark

VIKING offers a choice of product packages and systems that are standard or tailor made, and certified to the latest requirements.

The VIKING headquarters are located in Denmark. Our products are manufactured at production facilities in Denmark, Norway and Bangkok, Thailand.

The unique VIKING network of subsidiaries, agents and 270 authorised servicing stations makes us a truly global provider offering cost-effective and convenient service when and where you need it.



Global Service Network

An important consideration when investing in safety equipment is servicing in the long term.

VIKING is a global all-in-one service provider offering consolidated servicing of safety equipment on board. We offer total concept service packages including global competitive pricing, handling specifications and service certificates.

Our unique network of 270 authorised servicing stations follows strict guidelines for servicing VIKING's products.

The network is supported by certified educational programmes, spare parts supply and continually updated online information and manuals.

All products delivered for servicing are subjected to thorough and comprehensive tests for total quality assurance.

Authorised servicing stations have the appropriate tools and spare parts available as turnaround time is important to our customers.

Service can be booked by contacting any of our offices in our global network.

Contact your local office for the nearest VIKING approved servicing station.



An important consideration when investing in safety equipment is servicing in the long term.

Dedicated Global Production

Life-saving equipment is manufactured using a combination of modern technology and skilled manual labour.

Our commitment to quality and safety and our loyal and experienced employees mean that our working atmosphere is quite exceptional.

VIKING practices integrated production with joint global planning. Particular speciality competences or special know how are concentrated at individual production units. All our production facilities follow uniform guidelines and have identical systems and procedures. ISO 9000 standards assure a consistent and standardised quality in accordance with specifications.

Global Logistics

Our logistics network acts as one global unit with specialised systems for handling and tracking stock and delivery.

VIKING's logistics specialists have the necessary certifications for optimising handling of products covered by the Dangerous Goods Act such as lifejackets and liferafts. We are experienced in customising logistics for customers with centralised stock or several delivery points. VIKING's worldwide stock points are geared to carry the appropriate stock for each market to ensure that our customers benefit from optimal delivery and pricing at appropriate locations.



The VIKING advantage

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The VIKING advantage

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A truly global provider of essential safety equipment for passenger and cargo vessels, offshore, fire, defence, fishing and yachting. www.VIKING-life.com