



Passenger

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## VIKING Lifecraft™ System, VLSC 812

Item no.: VLSC

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The VIKING LifeCraft™ System is a true game-changer when it comes to passenger and cruise ship evacuation - making it possible to replace current evacuation options with a superior, hybrid solution. The system consists of four self-propelled inflatable.

- Better evacuation safety
- Easier crew handling
- Greater flexibility in installation choices
- More efficient maintenance
- Longer product lifetime
- Greater passenger confidence in onboard safety





# VIKING LifeCraft™ System, VLSC 812

## Technical Data, VLSC 4 x 203 A-pack system built-in.

The VIKING LIFECRAFT™ system, VLS, consists of a sealed housing, 4 escape ways (chutes) and a yoke with 4 LifeCraft™ Survival Crafts. The sealed housing contains a semi-automatic bousing system with wave compensation and a hydraulic driven launch system. The LifeCraft™ Survival Crafts are placed on a lifting cradle/yoke which is lowered to sea level, in case of emergency, by means of a controlled speed hydraulic winch.

The housing - being sealed and airtight - enables the S30 concept. Humidity level is kept within threshold limits by a built-in dehumidifier

<b>System dimensions</b>	Length	: 18.100 mm
	Depth	: 2.660 mm
	Height incl. foundation	: 2.990 mm
	Weight total (Incl. 4 LifeCraft™ Survival Craft and EscapeWays)	: 48.068 kg
	Max working load for launching	: 14.000 kg
	Max working load for maintenance and recovery	: 14.000 kg
<b>Winch manufacturer</b>	Viking A/S	
- Gear	Reggiana Riduttori	
- Motor	SAI Hydraulic Motors	
<b>Davit manufacturer</b>	Viking A/S	
<b>Launch system type</b>	Electrical/Hydraulic	
<b>Launch system hydraulic components</b>	Standard components with long MTBF (Mean Time Between Failure) from leading manufactures such as SUN Hydraulics and Danfoss Power-Solutions. All components come with proven track records from other off-shore applications and all with allowable storage temperature of -30°C - +65°C and an operational temperature range of -15°C - +40°C	
<b>Launch system electrical components</b>	Standard components with long MTBF (Mean Time Between Failure) from leading manufactures such as SUN Hydraulics and Danfoss Power-Solutions. All components come with proven track records from other off-shore applications and all with allowable storage temperature of -30°C - +65°C and an operational temperature range of -15°C - +40°C	
<b>Launch system Manufacturer</b>	HydraSpecma A/S	
<b>Dehumidifier type</b>	Absorption with 4 holes (for best effect)	
<b>Installation height</b>	This novel marine evacuation system is certified for use onboard appropriate ships for the following capacities and heights based on the corresponding descent rate as demonstrated during the timed capacity evaluation done from a height of 15 m	

**Examples:**

Installation Height (m)	Evacuation Capacity (Persons)
15	1462
18.2	1200
25	884

Other installation heights/capacity combinations are accepted within the maximum limits.

Maximum installation height: 25 m (based on maximum chute length)

<b>Launching height</b>	Approx. 4.000 - 25.000 mm																		
<b>Max trim/list</b>	10°/20° trim/list for evacuation and 1 1/2° for maintenance																		
<b>Distance between Turnblocks</b>	30 m (0/+1m), (GA drawing no. ENG-20100969)																		
<b>Rope data for launching</b>	Dyneema, Ø 24 mm, Break load = 580 kN																		
<b>Max lowering speed</b>	60 m/min																		
<b>LifeCraft System</b>	812 persons within 30 min. by 4 escapeways.																		
<b>LifeCraft Survival Craft</b>	Survival Craft approved for 203 persons with SOLAS A type emergency pack. VIKING LifeCraft self-propelled unit packed with desalination apparatus.																		
<b>Materials</b>	Housing, rafts, chutes, escapeway dispenser and service yoke. <table><tbody><tr><td>Plates</td><td>:</td><td>Steel, Q345D</td></tr><tr><td>Profiles</td><td>:</td><td>Steel, Q345D/AISI316L</td></tr><tr><td>Davits</td><td>:</td><td>Q690</td></tr><tr><td>Escapeway sections:</td><td></td><td>Outer liner of synthetic fire-retardant fabric Each section mounted on stainless steel rings (AISI316)</td></tr><tr><td>Liferafts</td><td>:</td><td>Nylon webbing covered with natural rubber, fire retardant canopy fabric</td></tr><tr><td>Cover plate</td><td>:</td><td>Fire retardant GRP, lifeboat spec. confirming to IMO MSC circular 1006</td></tr></tbody></table>	Plates	:	Steel, Q345D	Profiles	:	Steel, Q345D/AISI316L	Davits	:	Q690	Escapeway sections:		Outer liner of synthetic fire-retardant fabric Each section mounted on stainless steel rings (AISI316)	Liferafts	:	Nylon webbing covered with natural rubber, fire retardant canopy fabric	Cover plate	:	Fire retardant GRP, lifeboat spec. confirming to IMO MSC circular 1006
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<b>Physical interface to ship</b>	The housing is bolted to the foundation. Foundation is welded to deck. See drawing G-503419																		
<b>Electrical interface to ship</b>	380-480VAC 50/60HZ, Power consumption max. 25KW																		
<b>Design criteria</b>	According to LSA. The structure is designed with Factor Of Safety (FOS) 4.5. Falls, links, blocks with FOS 6.																		
<b>Approvals</b>	Approved according to SOLAS III, Regulation 38 and MSC.1/Circ.1455. The VIKING LIFECRAFT™ is approved according to A520(13).																		



<b>Class approval</b>	Lloyd's register – Prototype approval
<b>Flag approval</b>	Danish Maritime Authority, Bahamas Maritime Authority
<b>Activation</b>	<p>The LifeCraft™ system is activated by means of hydraulic pressure contained in accumulators. In case of missing oil pressure, the electric motor/oil pump in the system is used as back up - driven by the vessels emergency power.</p> <p>To secure, a failsafe launch, the possibility of faulty use of the system is reduced to an absolute minimum. I.e., each individual sequence can be initiated only in a predefined order and only when the previous sequence is completed. Each individual sequence can be stopped – and reactivated – at any given time as needed.</p> <p>As a last resort, the launch sequence can be initiated by operating the hydraulic valves manually. I.e., one valve to operate each of the 4 sequences described below – 4 valves in total</p> <p>The sequences are:</p> <ol style="list-style-type: none"><li>1: unlocks sea lashings and tighten up lowering lines.</li><li>2: opens hatch lock and hatch.</li><li>3: lifting yoke is lifted out.</li><li>4: lowers yoke.</li></ol> <p>Launch is complete when LifeCraft™ survival crafts inflate</p> <p>The two internally installed davits rotate about the floor-mounted pivots, bringing the lifting yoke with 4 Survival Craft and 4 escapeways out of the container.</p>
<b>Dispenser functionality</b>	<p>The escapeways are automatically pulled out into operational length while the yoke is lowered to the sea surface. This is facilitated by the escapeway dispenser, which is an all-mechanical device, measuring the lowering distance of the lifting yoke and, from this, releasing the appropriate number of escapeway sections.</p> <p>When the Survival Crafts are waterborne, the yoke sinks away and pulls the inflation lines for the Survival Crafts. When the two innermost Survival Crafts inflate, they will automatically place the escapeway outlet in position in the designated openings in the Survival Craft canopies.</p> <p>All 4 Survival Crafts are inflated simultaneously while the vessels safety crew makes the escapeway dispensers ready for entry. All 4 escapeways can be used for disabled, elderly and others with special needs by means of a controlled speed descent-device.</p> <p>Once boarding of the two outermost Survival Crafts is completed, they can be manoeuvred to safe distance of the vessel by means of own propulsion. Here after boarding of the remaining Survival Crafts starts and the procedure is repeated.</p>



## Supplier Data

Viking will, as supplier of the Viking LifeCraft System to yard or owner supply the following supplier data:

Detailed installation drawing based on final GA Drawing received from the yard or owner.

Ship specific Crew Training and onboard Maintenance Manuals for the Viking LifeCraft System.

Detailed progress plan on production and delivery of the Viking LifeCraft System with reference to the detailed delivery schedule provided by yard or owner.