



Combifloat



Modular Floating & Elevating Construction Systems



ELEVATE YOUR BUSINESS WITH OUR MODULAR CONSTRUCTION SYSTEMS

An introduction to Combifloat

Flexifloat Systems B.V. is the exclusive supplier of the modular Combifloat® pontoons with a deckload of 15t/m². A wide variety of clients in the offshore and marine construction industry are using this flexible modular floating and elevating construction system, eminently suitable for coastal and inland waters. By means of a special but simple coupling and locking system, the units can be assembled to any project-specific configuration. The unique coupling system is easy to handle and strong enough to be used in self Elevating Platforms with deck loads in excess of 800 mt.

Marine working environments are never constant, never the same. Equipment requirements for marine operations vary with local conditions and with the type of job to be performed. For every job, there is the challenge of finding the ideal equipment... and getting it there. The Combifloat Modular pontoon was designed with this in mind.

For many decades, Combifloat has been very successful in meeting the needs of our clients as they face their marine challenges. Our long history and extensive experience have contributed to our reputation for providing the highest quality, sound engineering, excellent workmanship and fast and reliable service in every corner of the world.



Floating or self-elevating platforms



The Combifloat pontoons are strong, simple to use, built with precision and developed in close cooperation with the industry to satisfy their need for economical and practical solutions for versatile applications and operations, in coastal and inland waters, all over the world.

Self-elevating platforms

The modular Combifloat pontoons can be delivered as self-elevating platforms for a variety of applications. All pontoons are internally strengthened for use in self-elevating platforms. Due to their modular nature, a variety of dimensions and capacities can be supplied.

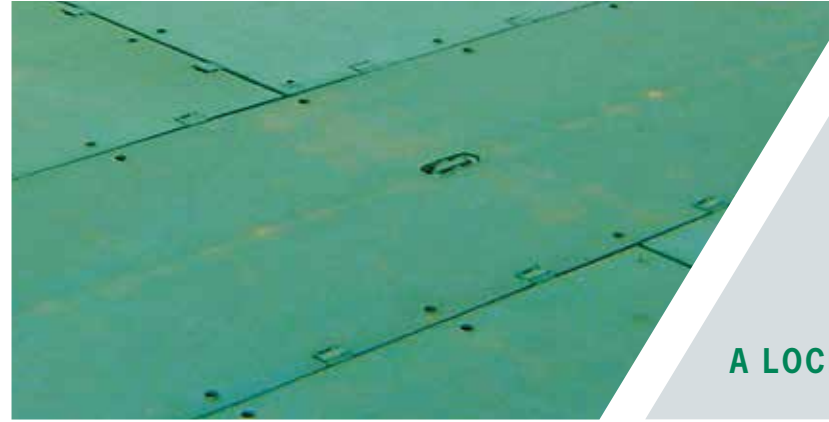
Hydraulic power packs installed on deck provide power for elevating and lowering the spuds and can be hooked up to other equipment such as mooring winches. The jacking mechanism of the platform consists of heavy duty hydraulic cylinders and movable cross heads. Platforms can be provided with a central control system for automatically jacking and leveling the platform. All components comply with Germanischer Lloyd rules and certification.

Floating applications

The standardized, watertight, welded steel and buoyant Combifloat pontoons are perfectly suitable for a variety of floating applications. The strong internal structure and integrated, easy to use, coupling mechanism provides sufficient strength to support the heavy deck loads needed for the execution of any water-borne project.



VERSATILE STANDARDIZED MODULAR EQUIPMENT



A LOCKING SYSTEM OF INGENUOUS SIMPLICITY



Combifloat pontoons are designed and dimensioned for easy handling to allow them to be transported to any remote location where only limited or restricted facilities are available.

The cast-steel coupling system, which offers high tensile strength, is simple, quick, rigid and effective. It is designed to be used, while afloat, without the need for special tools. The top and bottom locks are engaged simultaneously.

The pontoons can be assembled by an inexperienced crew and with no other tools than a hammer, a crowbar, and short sections of rope.



Designed with an emphasis on ease of use

Combifloat deck accessories



The standard Combifloat pontoons can be equipped with a wide variety of attachments and accessories to effectively perform the floating and elevating duties needed in project-specific circumstances.

If needed, the floats can be equipped with bollards, cleats, deck winches, holding- or elevating spuds, railings, sheaves, fairleads, etc., including outboard propulsion units with wheelhouse.





Combifloat® C-5 Series

The C-5 series modular pontoons have proven to be successful in a variety of self-elevating and/or floating applications.

As the pontoons are designed and dimensioned for easy handling, they can be easily installed on diverse and remote locations, which are inaccessible to conventional equipment.

The Combifloat pontoons offer you full customization and can be equipped with many attachments and accessories specifically needed to successfully execute your project.

The C-5 series are often used for geotechnical services and inland marine construction works.



Combifloat[®] C-7 Series



The Combifloat pontoons are designed with flexibility and ease of handling in mind. Whatever the environmental conditions or job requirements are, the pontoons offer the ultimate practical and economical solution.

To effectively perform your floating and elevating needs a large variety of accessories and attachments have been developed based on the extensive experience gained in the industry over many decades.

C-7 Series are often used for near shore marine construction works like: jetties, breakwaters, etc.





Combifloat® C-9.5 Series

The Combifloat C-9.5 Self Elevating Platform consists of standardized floating modules coupled through our proven male/female pin connection system. Due to its modular design overall dimensions can be adapted to customer needs.

The C-9.5 platform is supported by four 75" diameter spud legs, each one individually operated by four synchronized hydraulic cylinders mounted in heavy duty spudwells. Capacity of each spudwell is 600 ton. Spuds are delivered including two spud joints, separating the spud in three parts for ease of transportation. Modules are sized for easy transport by road, train or ship.

The C-9.5 Self Elevating Platforms are eminently suitable for construction works e.g.: jetties, breakwater, near shore oil & gas drilling, accommodation barges, etc.





Jacking System

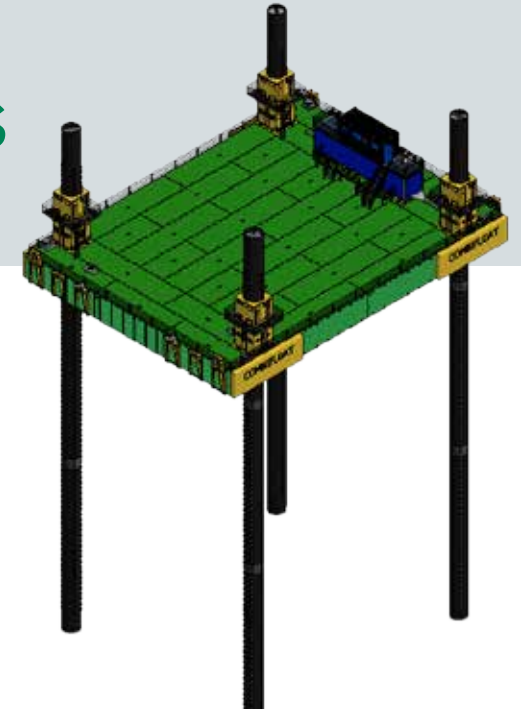
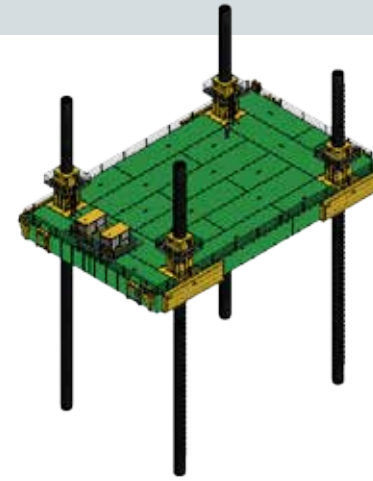
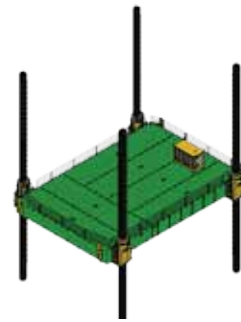
The jacking mechanism consists of two hydraulically operated crossheads per spudwell to lock and unlock the spud from vertical movement. Vertical movement is accomplished by four hydraulic heavy duty cylinders with a stroke of 1.2 m working on an operating pressure of 140 bar.

The four spudwells are powered by a containerized hydraulic power pack, for simultaneously lifting and lowering the spud legs through its housing seating. The power packs are silenced, with two 244 kW radiator cooled diesel engine driving a flywheel mounted tandem pump.

A Central Control System built in a deckhouse operates the hydraulic driven spudwells for synchronous lifting and automatic leveling of the platform. The central control system can also be used for operating the winches and or auxiliary equipment. The system is equipped with five cameras to monitor each spudwell and or winches individually.



General specifications Self Elevating Platforms



Combifloat® C-5 series

Modular Self Elevating Platform ⁽¹⁾

Combifloat® C-7 series

Modular Self Elevating Platform

Combifloat® C-9.5 series

Modular Self Elevating Platform

Dimensions	Combifloat® C-5 series Modular Self Elevating Platform ⁽¹⁾	Combifloat® C-7 series Modular Self Elevating Platform	Combifloat® C-9.5 series Modular Self Elevating Platform
Length	18.30 (or 15.15m)	30.50 (or 24.40 m)	36.60 m
Beam	12.20 m	18.30 m	27.45 m
Depth	1.53 m	2.13 m	2.91 m
Free length between Spud foot and bottom S.E.P. ⁽²⁾	23.00 m	32.00 m	48.00 m
Max. allowable deck load ⁽³⁾	Approx. 80 t	Approx. 400 t	Approx. 1,000
Jacking capacity	4 x 80 t	4 x 300 t	4 x 600 t
Allowable deck point load	15 t/m ²	15 t/m ²	15 t/m ²
GL class notation	+100A5K(20)	+100A5K(20)	+100A5 RSA (50)
	Self Elevating Unit	Self Elevating Unit	Self Elevating Unit

⁽¹⁾ Also available in Corner Spudwell Configuration.

⁽²⁾ Further extension upon request.

⁽³⁾ Subject to free spud length, required freeboard and environmental conditions.

General data Combifloats



Payload	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		
C-9.5	Quadra	2.39 0.52	2.22 0.69	2.05 0.86	1.92 0.99	1.78 1.13	1.65 1.26	1.51 1.40	1.38 1.53	1.24 1.67	1.11 1.80	0.89 1.93	0.84 2.07	0.71 2.20	0.57 2.34	0.44 2.47	0.30 2.61	
	Tri	2.39 0.52	2.19 0.72	2.00 0.91	1.82 1.09	1.64 1.27	1.46 1.45	1.28 1.63	1.10 1.81	0.92 1.99	0.74 2.17	0.56 2.35	0.38 2.53	0.20 2.71				
	Duo	2.39 0.52	2.08 0.83	1.78 1.13	1.51 1.40	1.24 1.67	0.97 1.94	0.70 2.21	0.43 2.48									
C-7	Quadra	1.66 0.47	1.52 0.61	1.39 0.74	1.26 0.87	1.12 1.01	0.99 1.14	0.85 1.28	0.72 1.41	0.59 1.54	0.45 1.68	0.32 1.81						
	Tri	1.66 0.47	1.43 0.70	1.28 0.85	1.12 1.01	0.94 1.19	0.76 1.37	0.59 1.54	0.41 1.72	0.23 1.90								
	Duo	1.66 0.47	1.39 0.74	1.12 1.01	0.85 1.28	0.59 1.54	0.32 1.81											
C-5	Quadra	1.16 0.36	1.03 0.49	0.89 0.63	0.76 0.76	0.62 0.90	0.49 1.03	0.35 1.17										
	Tri	1.16 0.36	0.99 0.53	0.80 0.72	0.62 0.90	0.44 1.08	0.26 1.26											
	Duo	1.16 0.36	0.89 0.63	0.62 0.90	0.35 1.17													
C-3	Quadra	0.82 0.36	0.57 0.61	0.33 0.85														
	Tri	0.82 0.36	0.49 0.69	0.18 1.00														
	Duo	0.82 0.36	0.33 0.85															



Technical data

UNIT	C-3				C-5				C-7				C-9.5			
	L [m]	B [m]	H [m]	W [Ton]	L [m]	B [m]	H [m]	W [Ton]	L [m]	B [m]	H [m]	W [Ton]	L [m]	B [m]	H [m]	W [Ton]
Quadra	9.12	2.28	1.18	7.33	12.20	3.05	1.52	13.10	12.20	3.05	2.13	17.10	12.20	3.05	2.91	20.00
Tri	6.84	2.28	1.18	5.68	9.15	3.05	1.52	9.70	9.15	3.05	2.13	13.65	9.15	3.05	2.91	15.50
Duo	4.56	2.28	1.18	4.05	6.10	3.05	1.52	6.90	6.10	3.05	2.13	9.04	6.10	3.05	2.91	11.10
Allowable	C-3				C-5				C-7				C-9.5			
Pull on each coupling	30				30				45				45 [Tons]			
Deck load	15				15				15				15 [Tons/m²]			

FLOATING STABILITY TO BE CHECKED FOR EACH CONFIGURATION. SUPPLIER IS NOT RESPONSIBLE FOR ANY MISPRINTS OR INCORRECT DATA IN THIS LEAFLET. ANY OPERATIONAL CONCLUSIONS DRAWN BY MEANS OF THIS LEAFLET SHOULD FIRST BE CHECKED AND APPROVED BY SUPPLIER.



A variety of applications

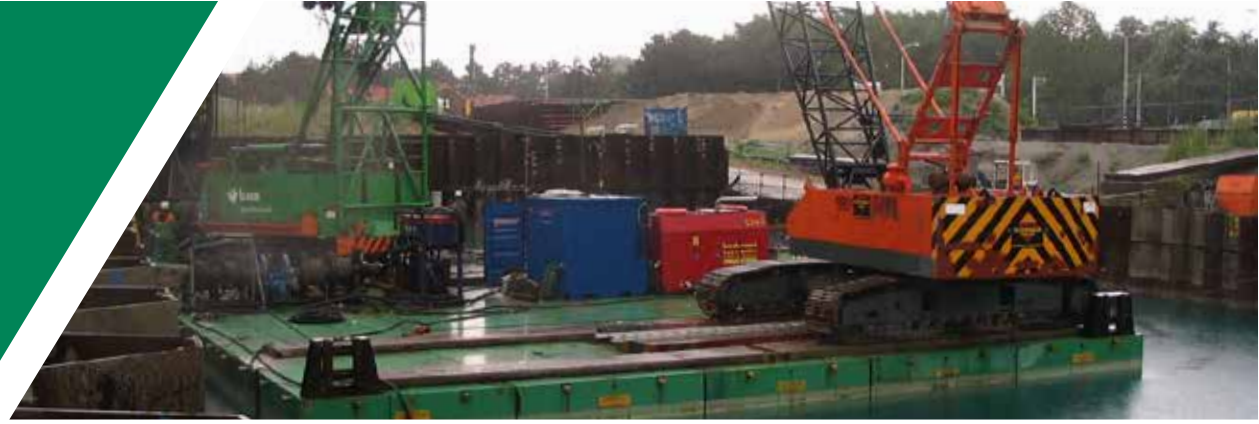
The ideal solution would be to build your own tailor-made platform that exactly meets the requirements of your job. Combifloat's flexible and modular construction system offers you exactly that solution. The modular, easily transportable steel units can be combined into nearly any shape and size, creating your ideal floating or self-elevating work platform.

All of the pontoons in a model series have the same draft. A self-elevating platform can be created by adding standard spudwells, spuds and power units. Propulsion units, winches, ramps and rakes are also available.

The pontoons can be used to create solutions for a wide variety of applications, including

- self-elevating platforms for marine construction or offshore projects
- self-propelled work/push boats
- oil and gas drilling barges
- transport barges
- hoover platforms
- crane pontoons
- ferries
- bridges
- jetties
- exhibition platforms
- accommodation platform
- etc.





ENDLESS ASSEMBLY OPTIONS

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