Mooring Solutions for Floating Pontoons
The DualDocker Eco Marina

- Patented damped mooring systems
Chains
- A lot of movement at low water level
- High impact on underwater world

Lack of Convenience
- Disturbing movement in windy and wavy conditions
- Strong jerking due to lack of dampening

Lack of Security
- Damages during storms
- Damages due to flotsam

Caution: No damping results in
- 5 times higher peak load (wind & waves)
- 10 times higher peak load (flotsam & collisions)

Piles
- High impact on underwater world

Lack of Convenience & Security
- Strong jerking in windy and wavy conditions (loose piles)
- Overload damages due to limited damping capacity

High Costs
- 2/3 of total length needs to be driven into sea/river bed
- Problematical in deep waters and rocky or sandy sea/river beds
Innovation for Floating Pontoons

• **Jerk-free for highest convenience**

• **No Play**
  Limited sideways movement, regardless of water level

• **High Damping Characteristics**
  Energy caused by wind, waves, flotsam and collisions is absorbed by the DualDocker. (Big damping space results in low strain!)

• **Reduction of Forces**
  High damping characteristics result in 10 – 20 times less retention force

• **Security during Storms**
  No more collisions with quayside. The Pontoon lies damped and secure at its place, even in harsh conditions

• **Safe Money**
  20 times less retention force results in considerably lower forces → Lower overall project costs!

• **Eco Friendliness**
  No impact on underwater world
  No piles, no concrete blocks, no chains/deadweights
**Technical Data:**

- Working load from 5 kN up to 3 000 kN
- Damping way push & pull from 0,2 m up to 1 m
- Max. tolerated water level difference 7 m (with 7 m tube length).
- Length: Standard up to 7 m ; Special lengths up to 20 m upon request.
1 … Framework: Braced tube frame: Aluminium hard anodised, stainless steel, etc
2 … Distance holders: Ball heads on both side
3 … Lines: Damped connection between framework and floating pontoon
4 … Floating Pontoon: Concrete, steel, stainless steel, aluminium, compound, wood (between 1,5 and 6 m wide)
5 … High damping capacity: ± 0,5 m in both directions!
6 … Float

Standard widths: 6, 9, 12, 15 or 18 m
Floating Pontoon up to 40 m

Up to 40 m in length

Framework in 2-4m depth
Length Pontoon: up to 80 m
Width Pontoon: between 3 and 6 m
Length Framework: between 9 and 18 m
Width at quay side: between 15 and 30 m (Force lever: 1.33)
Depth of framework: 2-4 m (depending on sea bed)
DualDocker arms: 4 pieces, handling 20 tons each

F_L max. 80 tons
F_Q max. 30 tons
**Length Pontoon**: up to 120 m  
**Width Pontoon**: between 3 and 6 m  
**Width Framework**: between 12 and 18 m  
**Width at quay side**: up to 45 m (Force lever: 1.33)  
**Depth of framework**: 2-4 m deep (depending on sea bed)  
**Framework lines top**: 4 pieces  
**Framework lines bottom**: 4 pieces  
**DualDocker arms**: 6 pieces handling 20 tons each, 5m long, damping way: ± 0.5 m  

**F_L** max. 120 tons  
**F_Q** max. 45 tons
Floating Pontoons

Coupled Floating Pontoons

- Ideal solution for big marinas with a number of 90° floating pontoons.
- The submerged framework guarantees utmost stability. Force lever < 0.5.
- Advantages: No play regardless of water level difference, high damping capacity, no impact on underwater world!
Floating Pontoons

Yacht Mooring System 1: DualDocker

Installation on tracks for utmost flexibility

Stern-to-pier

No bow lines!
Convenience
• Jerk-free
• Damping without play regardless of water level differences

Security
• No collisions with quay
• Reduced forced due to high damping capacity
• Less movement, pontoon lies stable even in harsh conditions.
• Ultra high damping to prevent collision damages

Cost Reductions
• 20 times less force results in considerably lower overall project costs.
• Negligible maintenance costs
• No collisions, no repair costs
• No adjustments of chains, concrete blocks or piles

Eco Friendliness
• No impact on underwater world
• No piles, no concrete blocks, no chains
Direct links:

Video Portoroz / Slowenien: October 2011, stable during force 8 wind

Video Punat / Kroatien: October 2011, stable during force 7 wind

Video Palermo / Italien: October 2010, docking manoeuvre

Video Rungsted / Dänemark: May 2009, stable during force 6 wind

DualDocker Imagevideo

All Videos via YouTube

More info on our website www.dualdocker.at

Or contact us directly:
Sales: doris.czech@dualdocker.com  Technical Support: michael.fuhrmann@dualdocker.com