Marina Lifting Equipment Planning Checklist (2026 Edition)

Marina Design & Boat Hoist Selection Checklist

Project Name: _____

Date: _____

Completed By: _____

I. Project Type Definition (Project Basics)

Please define the nature of your project first, as this determines the underlying logic for selection.

- [ ] **New Marina Project**
  - *Focus:* High planning freedom; prioritizing future vessel trends (5-10 years) and tonnage expansion capabilities is essential.

- [ ] **Renovated / Expanded Marina**
  - *Focus:* Limited by existing structures; prioritizing the assessment of ground bearing capacity, channel width, and minimizing operational disruption during construction.

II. Infrastructure & Civil Works Conditions

Equipment selection must match on-site civil engineering conditions to avoid expensive modification costs later.

- [ ] **Ground Bearing Capacity:**
  - [ ] What is the known rated bearing capacity of the pier/breakwater? (tons/m²)
  - [ ] Is a **Low Ground Pressure design** required (e.g., increasing the number of wheels) to adapt to aging structures?

- [ ] **Operation Channel:**
  - [ ] What is the minimum clear width of the existing/planned channel?
  - [ ] Are there right-angle turns or narrow turnaround areas? (This impacts steering mode selection).

- [ ] **Slipway / Docking Well:**
  - [ ] Is the internal width of the docking well sufficient to accommodate the target maximum beam vessels (e.g., Catamarans)?
  - [ ] Are there specific slope/gradient limitations for the hoist to climb?

III. Vessel & Load Analysis

Do not just look at current vessels; consider the future fleet.

- [ ] **Target Maximum Tonnage:**
  - [ ] Current maximum vessel weight: _____ tons.
  - [ ] Reserved capacity for future upgrades: _____ tons (Moderate redundancy is recommended for new marinas).

- [ ] **Special Vessel Type Coverage:**
  - [ ] **Catamarans** — *Requires attention to the hoist's inside clear width.*
  - [ ] **Super-high Mast Sailboats** — *Requires attention to open-top crossbeam function or clearance height.*
  - [ ] **Racing Yachts / Deep Draft Vessels** — *Requires attention to sufficient lifting stroke (hoisting height).*

IV. Equipment Configuration Preferences

Customize core equipment functions based on operational needs.

- [ ] **Steering System:**
  - [ ] **Standard 2-Wheel Steering** (Suitable for spacious, open yards).
  - [ ] **4-Wheel / All-Wheel Steering** (Crab steer, 90° transverse, carousel/pivot steer) — *Essential for restricted spaces.*

- [ ] **Structure Type:**
  - [ ] Standard U-frame structure.
  - [ ] Articulated pivot structure (Adapts to uneven ground to prevent structural stress).
  - [ ] Customized non-standard span or height.

- [ ] **Intelligence & Control:**
  - [ ] Remote fault diagnosis & monitoring system?
  - [ ] Wireless remote control operation?
  - [ ] Electronic weighing & overload protection system?

V. Investment & Operational Goals (ROI)

Balancing initial investment with long-term benefits.

- [ ] **Delivery & Installation Cycle:**
  - [ ] Is rapid delivery required to minimize port closure time? (Critical for renovation projects).

- [ ] **Total Cost of Ownership (TCO):**
  - [ ] Prioritize anti-corrosion coating (C5-M level) and high-quality components to reduce long-term maintenance costs?

Expert Tip

"For **New Marinas**, plan once for the long term to avoid forced equipment replacement due to vessel upsizing in 3-5 years. For **Renovated Marinas**, prioritize 'Wheel Load Simulation' to ensure the safety of old infrastructure before increasing capacity." — *HSCRANE Senior Engineer*

Next Steps: If you have checked most of the boxes above, or are unsure about specific parameters: **Please send this checklist to the HSCRANE Team (info@huasuicrane.com)** We will provide you with a free **"Marina Wheel Load Simulation Report"** and a customized equipment proposal.

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