HUASUI HEAVY INDUSTRY

# Travel Lift Selection Parameter Questionnaire (Detailed Version)

**Applicable for:** Marinas, Boatyards, Ship Repair Facilities, Shipbuilders, and Yacht Storage Centers

This questionnaire is designed to assist in Travel Lift selection, project planning, and technical proposal development. It can be used as a customer requirement survey form or engineering design reference.

## 1. Vessel Information

| Selection Item | Parameter | Description | Impact on Equipment Selection |
|---|---|---|---|
| Vessel Type | Monohull / Catamaran / Trimaran / Workboat / Passenger Vessel | Different vessel types have different load distribution characteristics | Determines sling arrangement |
| Annual Vessel Volume | ____ vessels/year | Total annual launch & retrieval operations | Determines equipment utilization rate |
| Maximum Length Overall (LOA) | ____ m | Overall vessel length | Affects span design |
| Maximum Beam | ____ m | Maximum vessel width | Determines clear span |
| Maximum Draft | ____ m | Distance from waterline to keel | Determines lifting height |
| Maximum Vessel Weight | ____ t | Fully loaded displacement | Determines rated lifting capacity |
| Hull Material | FRP / Aluminum / Steel / Composite | Different materials have different load-bearing characteristics | Influences lifting point design |
| Vessel Value | Luxury Yacht / Standard Vessel | Different safety requirements | Influences safety configuration level |

## 2. Marina Operations

| Selection Item | Parameter | Description | Impact on Equipment Selection |
|---|---|---|---|
| Daily Operating Frequency | ____ cycles/day | Number of launch and retrieval operations | Determines duty classification |
| Peak Operating Demand | ____ cycles/hour | Peak workload requirement | Determines operating speed |
| Working Schedule | Single Shift / Double Shift / 24-Hour Operation | Equipment utilization intensity | Affects power system selection |
| Customer Type | Private Yacht Owners / Yacht Clubs / Commercial Fleets | Operating model | Determines equipment grade |
| Future Expansion Plan | Yes / No | Future vessel size upgrades | Requires capacity reserve |

## 3. Site Conditions

| Selection Item | Parameter | Description | Impact on Equipment Selection |
|---|---|---|---|
| Water Depth | ____ m | Working water depth | Influences design configuration |
| Dock Length | ____ m | Available waterfront area | Affects equipment layout |
| Yard Width | ____ m | Available land-side operating area | Influences steering design |
| Storage Area | ____ $m^2$ | Dry storage area | Determines transportation routes |
| Ground Surface Type | Concrete / Asphalt / Steel Structure | Ground load-bearing characteristics | Influences wheel load design |
| Ground Bearing Capacity | ____ $t/m^2$ | Civil engineering parameter | Determines wheel quantity and load distribution |
| Turning Radius Limitation | ____ m | Site restriction | Determines steering mode |

## 4. Main Travel Lift Parameters

| Selection Item | Parameter | Description | Impact on Equipment Selection |
|---|---|---|---|
| Rated Lifting Capacity | 30T – 1200T | Core specification | Selected according to maximum vessel weight |
| Safety Factor | 1.1 – 1.3 | Recommended load reserve | Ensures safe operation |
| Clear Span | 4 m – 30 m+ | Distance between inner sides of main frames | Determined by vessel beam |
| Lifting Height | 4 m – 25 m | Sling lifting travel | Determined by draft requirements |
| Lifting Speed | ____ m/min | Operating efficiency indicator | Influences productivity |
| Travel Speed | ____ m/min | Transportation efficiency | Affects marina turnover rate |
| Steering Mode | Front-Wheel Steering / Crab Steering / All-Wheel Steering | Maneuverability | Important for confined spaces |

## 5. Power System Options

| Selection Item | Option | Description | Selection Item |
|---|---|---|---|
| Diesel Drive | Yes / No | Traditional and reliable solution, suitable for heavy-duty applications | Diesel Drive |
| Electric Drive | Yes / No | Low noise and environmentally friendly, | Electric Drive |

| | | | |
|---|---|---|---|
| | | increasingly popular in marinas | |
| Hybrid Drive | Yes / No | Energy-saving solution for premium projects | Hybrid Drive |
| Battery-Electric Drive | Yes / No | Zero-emission solution for sustainable marina developments | Battery-Electric Drive |

## 6. Safety Configuration Options

| Safety Feature | Standard / Optional | Function | Safety Feature |
|---|---|---|---|
| Load Monitoring System | Standard / Optional | Real-time load monitoring | Load Monitoring System |
| Anti-Tipping Protection System | Standard | Prevents overturning accidents | Anti-Tipping Protection System |
| Synchronous Lifting System | Standard | Ensures even lifting and protects hull structure | Synchronous Lifting System |
| Wind Speed Monitoring System | Optional | Adverse weather warning | Wind Speed Monitoring System |
| Anti-Collision System | Optional | Intelligent obstacle detection | Anti-Collision System |
| Camera Monitoring System | Optional | Improves operator visibility | Camera Monitoring System |
| Remote Diagnostic System | Optional | Reduces downtime and maintenance costs | Remote Diagnostic System |

## 7. Environmental Conditions

| Selection Item | Parameter | Description | Selection Item |
|---|---|---|---|
| Project Country | _____ | Compliance with local regulations | Project Country |
| Ambient Temperature | ____ °C | Operating temperature range | Ambient Temperature |
| Wind Speed Requirement | ____ m/s | Coastal environmental consideration | Wind Speed Requirement |
| Corrosion Level | High / Medium / Low | Determines anti-corrosion specification | Corrosion Level |
| Seismic Requirement | Yes / No | Structural reinforcement for seismic regions | Seismic Requirement |

## 8. Certification Requirements

| Certification | Required | Description | Certification |
|---|---|---|---|
| CE Certification | Yes / No | Mandatory for European market | CE Certification |
| ISO Certification | Yes / No | International quality management standard | ISO Certification |
| ABS Certification | Yes / No | American Bureau of Shipping requirements | ABS Certification |
| DNV Certification | Yes / No | Offshore and high-end marine projects | DNV Certification |
| CCS Certification | Yes / No | China Classification Society | CCS Certification |

| | | | |
|---|---|---|---|
| | | requirements | |

## 9. Budget & Investment Planning

| Selection Item | Parameter | Description | Selection Item |
|---|---|---|---|
| Budget Range | USD _____ | Project investment budget | Budget Range |
| Required Payback Period | ____ Years | ROI evaluation | Required Payback Period |
| Financing Requirement | Yes / No | Procurement and financing model | Financing Requirement |

## 10. After-Sales Service Requirements

| Service Item | Required | Description | Service Item |
|---|---|---|---|
| Installation Supervision | Yes / No | On-site installation guidance | Installation Supervision |
| Operator Training | Yes / No | Safe operation training | Operator Training |
| Spare Parts Support | Yes / No | Maintenance and service support | Spare Parts Support |
| Remote Technical Support | Yes / No | Reduced maintenance costs and downtime | Remote Technical Support |

## HSCRANE Recommended Travel Lift Capacity Guide

| Maximum Vessel Weight | Recommended Travel Lift Capacity | Maximum Vessel Weight | Recommended Travel Lift Capacity |
|---|---|---|---|
| ≤ 20 t | 25T – 30T | ≤ 20 t | 25T – 30T |

| | | | |
|---|---|---|---|
| 20 – 40 t | 50T | 20 – 40 t | 50T |
| 40 – 80 t | 80T – 100T | 40 – 80 t | 80T – 100T |
| 80 – 120 t | 150T | 80 – 120 t | 150T |
| 120 – 200 t | 200T – 250T | 120 – 200 t | 200T – 250T |
| 200 – 300 t | 300T | 200 – 300 t | 300T |
| 300 – 500 t | 500T | 300 – 500 t | 500T |

## HSCRANE Recommended Selection Formula

**Travel Lift Rated Capacity ≥ Maximum Vessel Weight × 1.2**

***Example:***

Maximum Vessel Weight: 80 t

Recommended Travel Lift Capacity: 100 t

A 20% safety margin is recommended to accommodate future vessel upgrades and ensure long-term safe operation.

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Project Name:_____

Company:_____

Contact Person:_____

Date:_____

Signature:_____