

Ship PI API

Getting Started Manual

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Overview

The Ship PI API allows approved users to **retrieve KPI/PI data**, **upload quarterly vessel reports**, and **integrate Ship PI into internal systems**. All API endpoints are documented in the production Swagger environment:

Production Swagger:

<https://bimcoskpiapiv2-production.azurewebsites.net/swagger/index.html>

To interact with the API, consumers must authenticate with a **JWT token**.

Authentication (JWT Token)

To generate a token, the consumer must have:

- **AccessTokenURL:** <https://login.microsoftonline.com/79676adf-74eb-45a5-af9b-7995540bf5c6/oauth2/v2.0/token>
- **ClientID:** *Provided by BIMCO*
- **ClientSecret:** *Provided by BIMCO*
- **Scope:** `api://ClientID/.default`

Once the token is generated, it is passed as a Bearer token in the Authorization header of all API calls.

Endpoint: `/api/Token/GenerateToken`

Refer to [Swagger, Authentication](#) for request examples.

API Structure at a glance

The API supports:

- **GET** methods for business-units, vessel lists, Benchmarks, KPIs, and PI data.
- **POST** methods for validation and upload of vessel datasets.

The import/export functionality is central to Ship PI operations.

Importing & Exporting Vessels

Below is the required sequence for any consumer who wants to work with quarterly vessel data.

- Step 1 – Retrieve Business Units / Fleets

Endpoint: /api/MyShips/GetCompanyBusinessUnits?quarter=YYYY-QX

Purpose: Obtain the list of business units and fleets to use in subsequent calls.

- Step 2 – Extract Vessel Data (Optional)

Endpoint: /api/MyShips/GetKPIData

Example Payload

```

1  {
2    "fileType": "SemicolonSeparatedCsv",
3    "quarter": "2024-Q4",
4    "businessUnitOrFleet": "221",
5    "includeShipAttributes": true,
6    "includeCustomData": true,
7    "includePerformanceIndicators": true,
8    "includeKeyPerformanceIndicators": true,
9    "includeKpiGroups": true
10 }
11

```

This returns a **CSV** (preferred) containing vessels and all selected properties.

Preparing Upload Files

All uploads must follow strict formatting rules:

Required Row Structure

- **Row 1 – Field Definition Row**
Full list of property names (e.g. IMO_NUMBER;VESSEL_NAME;...).
- **Row 2 – Placeholder Row**
Must exist; may contain empty fields.
- **Row 3+ – Vessel Data Rows**

For example, see: [Sample UploadModel DTO](#)

Minimum required Columns

The following columns must be present when uploading:

- IMO_NUMBER
- VESSEL_NAME

- DOC_HOLDER
- TYPE (must be "Vessel")
- BUSINESS_UNIT
- FLEET (may be empty)
- QUARTER
- Required PIs for the relevant KPI calculation (See: [List of PIs](#))
- META024 (See: [Ship-Type Codes](#))

Ship-type codes must be selected from the full list included in the document.

Validating an Upload (Mandatory)

Endpoint: /api/MyShips/ValidateUpload

Purpose:

- Ensures the CSV format is correct (See: [Sample UploadModel DTO](#))
- Ensures all required fields are present (See: [Minimum required Columns](#))
- Returns a **CacheKey** if validation is successful

Example File Submission

Form-data:

- Quarter = 2025-Q4
- File = <CSV file>

If no errors occur, the response includes:

```
1  "cacheKey": "<GUID>"
2
```

This cacheKey is required for the next step.

Uploading Data (Commit Step)

Endpoint: /api/MyShips/Upload

Import Modes

- **Append** – Updates and merges the import data with existing account data. Overwrites all existing values if present in the file.
- **Merge** – Only fills *null* values, does not overwrite existing data.

For first-time users, **Append** (aggressive overwrite) produces the most predictable results.

Example Payload

```
1 CacheKey: <returned from validation>
2 ImportMode: Append
3 Quarter: 2025-Q4
4
```

End-to-End Example (Minimal)

1. Get Business Units (See: [Importing & Exporting Vessels](#))
Call: GetCompanyBusinessUnits?quarter=2025-Q3
2. Build CSV (See: [Preparing Upload Files](#))
 - a. Include:
 - i. Definition row
 - ii. Placeholder row
 - iii. One or more vessel rows
3. Validate (See: [Validating an Upload \(Mandatory\)](#))
POST file to ValidateUpload
Receive cacheKey.
4. Commit Upload (See: [Uploading Data \(Commit Step\)](#))
POST to Upload with:
 - a. cacheKey
 - b. ImportMode = Append
 - c. Quarter = 2025-Q4
5. Confirm
Log into the Ship PI portal and verify data.

Best Practices for New Consumers

- Always test uploads using **ValidateUpload** first.
- Start with 1–2 vessels to confirm formatting.
- Use **SemicolonSeparatedCsv** fileType for consistency.
- Confirm ship-type codes are correct.
- Retain CacheKeys and validation logs for troubleshooting.
- User **Append** when uploading data for increased predictability.

Troubleshooting

Common Issues:

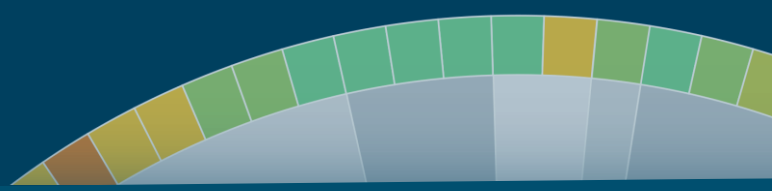
- “Object reference not set...” – Usually formatting or missing required PIs.
- Missing placeholder row – Upload rejected.
- Incorrect ship-type code – KPI calculations fail.
- Partial updates not supported – Must upload full vessel dataset.

Ship-Type Codes

The document provides a complete list of 29 ship-type codes. These must be used when setting META024 (ShipType).

Value	Key (for data import)
Bulk Dry	BULK_DRY
Bulk Dry/Liquid	BULK_DRY_LIQUID
Bulk Dry/Oil	BULK_DRY_OIL
Chemical	CHEMICAL
Container	CONTAINER
Dredging	DREDGING
Fish Catching	FISH_CATCHING
General Cargo	GENERAL_CARGO
Inland Waterways Dry Cargo/Passenger	DRY_CARGO_PASSENGER
Inland Waterways Other Non Seagoing	OTHER_NON_SEA_GOING
Inland Waterways Tanker	TANKER
Liquefied Gas	LIQUEFIED_GAS
Non Merchant Ships	NON_MERCHANT_SHIPS
Offshore Supply	OFFSHORE_SUPPLY
Oil	OIL
Other Activities	OTHER_ACTIVITIES
Other Bulk Dry	OTHER_BULK_DRY
Other Dry Cargo	OTHER_DRY_CARGO
Other Fishing	OTHER_FISHING
Other Liquids	OTHER_LIQUIDS
Other Offshore	OTHER_OFFSHORE

Passenger	PASSENGER
Passenger/General Cargo	PASSENGER_GENERAL_CARGO
Passenger/Ro-Ro Cargo	PASSENGER_RORO_CARGO
Refrigerated Cargo	REFRIGERATED_CARGO
Research	RESEARCH
Ro-Ro Cargo	RORO_CARGO
Self Discharging Bulk Dry	SELF_DISCHARGING_BULK_DRY
Towing/Pushing	TOWING_PUSHING
Yacht	YACHT

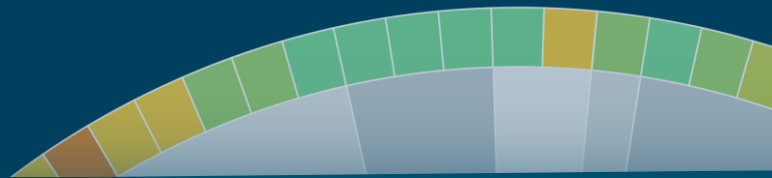


Sample UploadModel DTO

Below is CSV file content including a data update for a single vessel created under the "BIMCO" Business_Unit

```
IMO_NUMBER;VESSEL_NAME;DOC HOLDER;TYPE;BUSINESS_UNIT;FLEET;QUARTER;PI001
;PI002;PI003;PI004;PI005;PI006;PI007;PI008;PI009;PI010;PI011;PI012;PI013;PI014;PI015;P
I016;PI017;PI018;PI019;PI020;PI021;PI022;PI023;PI024;PI025;PI026;PI027;PI028;PI029;PI0
30;PI031;PI032;PI033;PI034;PI035;PI036;PI037;PI038;PI039;PI040;PI041;PI042;PI043;PI04
4;PI045;PI046;PI047;PI048;PI049;PI050;PI051;PI052;PI053;PI054;PI055;PI056;PI057;PI058;
PI059;PI060;PI061;PI062;PI063;PI064

;;;;;;Actual drydocking costs;Actual drydocking duration;Actual unavailability;Agreed
drydocking budget;Agreed drydocking duration;Number of officers employed;Emitted
mass of CO2;Emitted mass of NOx;Emitted mass of SOx;Last year's AAE (Additional
Authorized Expenses);Last year's actual running costs and accruals;Last year's running
cost budget;Number of absconded crew;Number of allisions;Number of ballast water
management violations;Number of beneficial officer terminations;Number of cadets
under training with the DOC holder;Number of cargo related incidents;Number of cases
where a crew member is sick for more than 24 hours;Number of cases where drugs or
alcohol is abused;Number of charges of criminal offences;Number of collisions;Number of
conditions of class;Number of contained spills of liquid;Number of seafarers not relieved
on time;Number of dismissals;Number of environmental related deficiencies;Number of
explosion incidents;Number of failures of critical equipment and systems;Number of
fatalities due to work injuries;Number of fatalities due to sickness;Number of fire
incidents;Number of groundings;Number of health and safety related
deficiencies;Number of HR related deficiencies;Number of logged warnings;Number of
lost workday cases;Number of navigational related deficiencies;Number of officer days
onboard all ships with the DOC holder;Number of officer experience points;Number of
officer terminations from whatever cause;Number of officer trainee man days;Number of
officers onboard;Number of operational related deficiencies;Number of passengers
injured;Number of permanent partial disabilities;Number of permanent total disabilities
(PTD);Number of PSC deficiencies;Number of PSC inspections;Number of PSC
detentions;Number of PSC inspections resulting in zero deficiencies;Number of recorded
external inspections;Number of releases of substances to the environment;Number of
security related deficiencies;Number of oil spills;Number of unavoidable officer
terminations;Number of ships operated under the DOC holder;Number of observations
during commercial inspections;Number of commercial inspections;Number of violations
```



of rest hours;Passenger exposure hours;Planned unavailability;Total exposure
hours;Transport work

9004528;Athens Warrior;TRUE;Vessel;BIMCO;;2025-
Q4,,,,,,,,,,,,,10,,,,,,,,,,,,,1,,,,,,,,,,,,,