

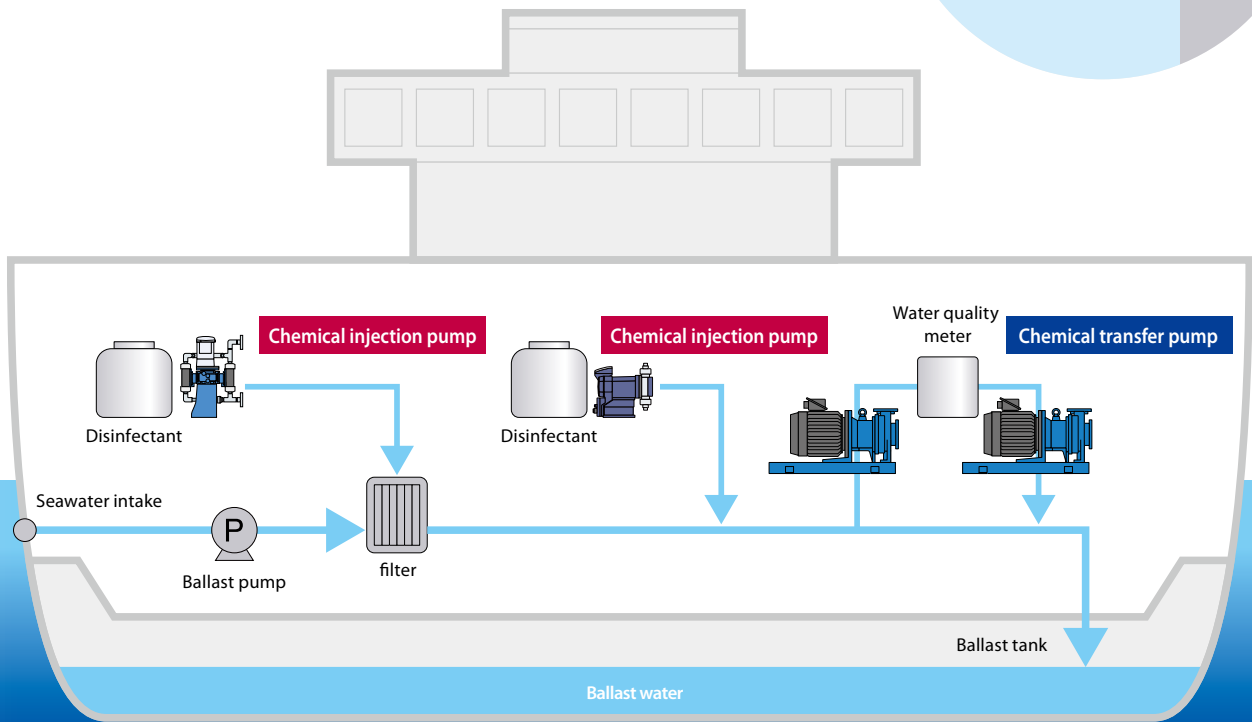
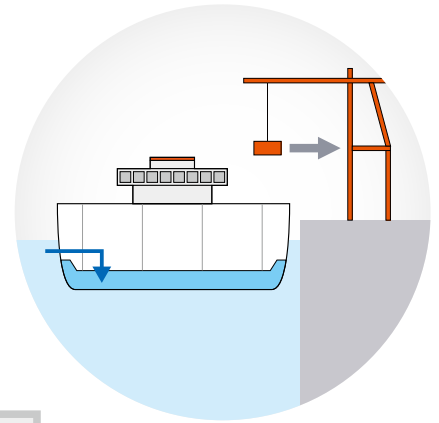
**A lineup of devices optimal for chemical liquid injection and transfer  
Iwaki contributes to ballast water management!**

# A lineup of devices optimal for chemical liquid injection and transfer Iwaki contributes to ballast water management!

Proper ballast water management is extremely important to protect the environment and to ensure safe navigation. IWAKI lines up a variety of products including liquid chemical injection pumps and transfer pumps, and contributes to ballast water management.

## Water injection (Ballast)

When a ship unloads cargo, seawater is taken into the ballast tank to stabilize the vessel. Appropriate water treatment is required to eliminate microorganisms in the seawater from being transferred to other sea areas. This process involves physical treatment with filters or ultraviolet light, and chemical treatment with chemical solutions.



### Chemical injection pump

Meet the needs at any site

Motor driven metering pumps

**IX** series

Max. discharge capacity: 7.5 - 300 L/h  
Max. discharge pressure: 0.4 - 1.7 MPa



Low pulsation, high-efficiency and energy efficiency

Motor driven metering pumps

**TD** series

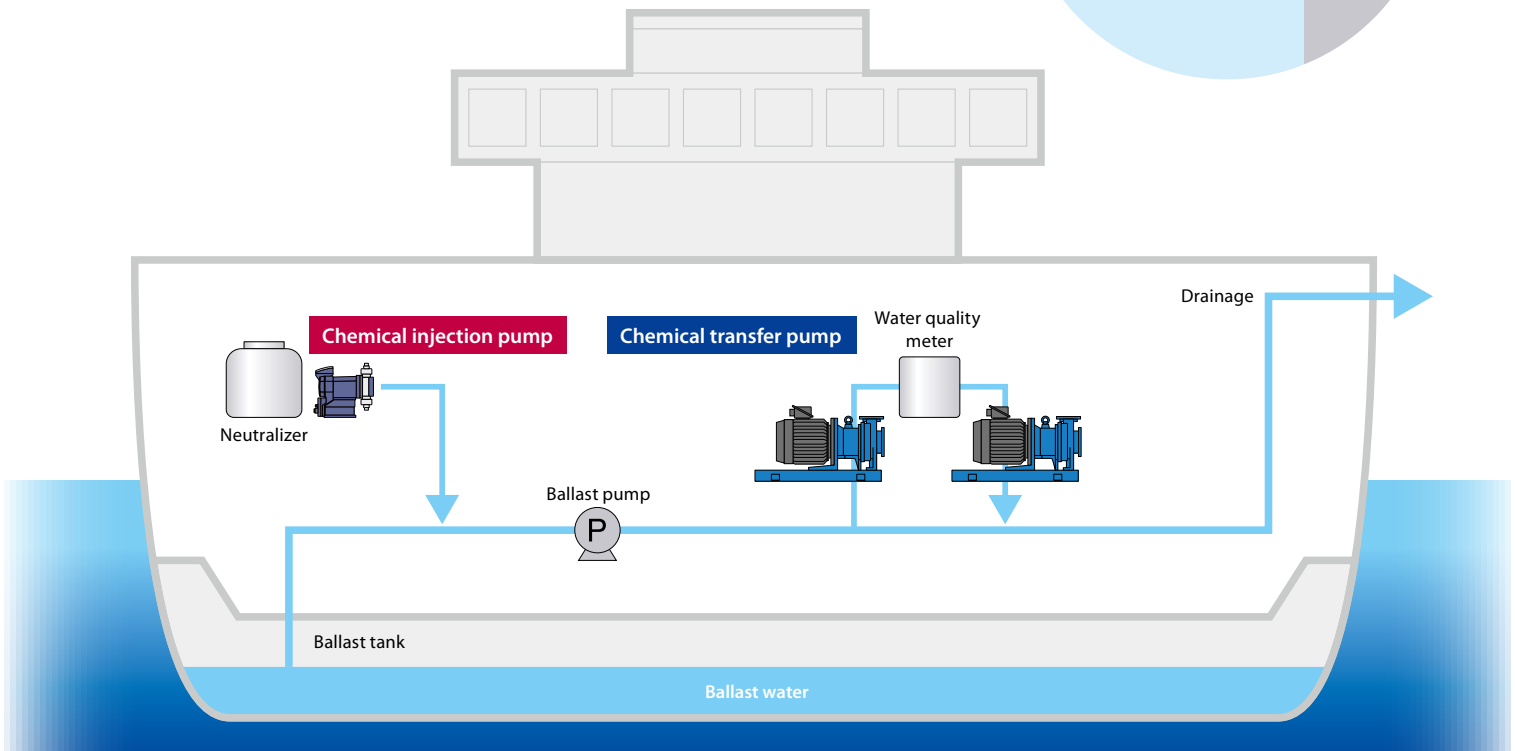
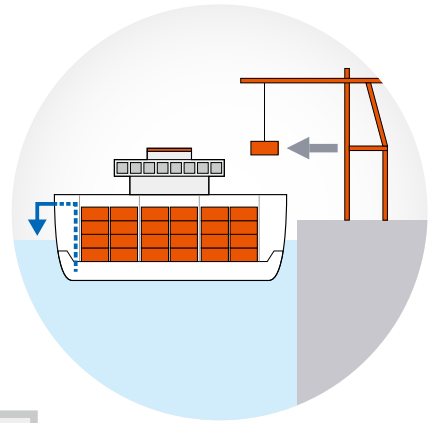
Max. discharge capacity: 0.15 - 8.5 L/min  
Max. discharge pressure: 0.3 - 1.0 MPa





## Drainage (Deballast)

When a ship loads cargo, seawater is discharged from the ballast tank to stabilize the vessel. The ballast water containing residual chemical solution is neutralized and detoxified before drainage.



## Chemical transfer pump

Heavy duty design to withstand severe operating conditions

Magnetic drive pumps

**MDM** series

Max. discharge capacity: 200 - 1400 L/min  
 Max. head: 9 - 74 m (50Hz)  
 12.5 - 107 m (60Hz)



Air-driven pumps that do not require explosion protection

Pneumatic drive pumps

**TC** series

Max. discharge capacity: 11.5 - 950 L/min  
 Supply air pressure: 0.1 - 0.85 MPa

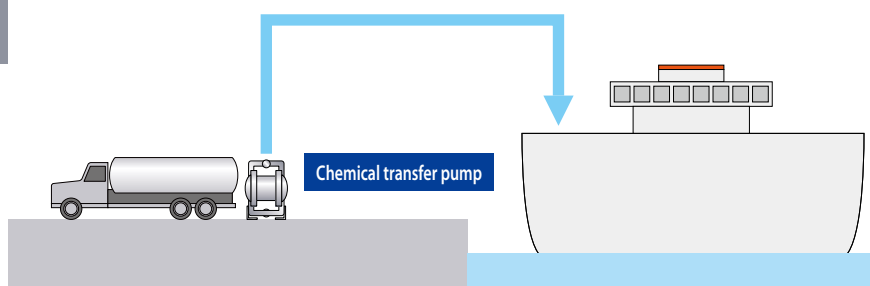




## Chemical replenishment

Chemical solution is supplemented from land into the tank in the vessel.

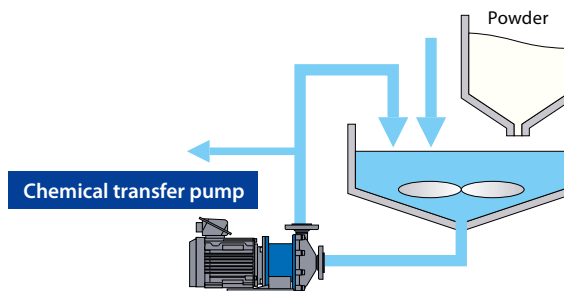
A high flow rate pump and self-priming pump are used.



## Powder dissolution

Chemical product is occasionally transferred in a powder form and dissolved before use.

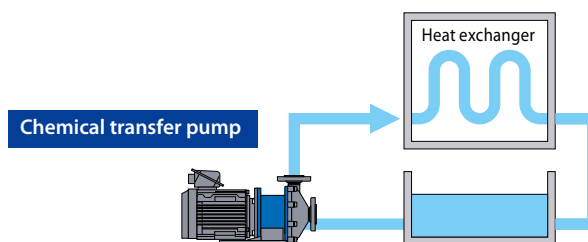
A pump not affected by chemicals is required for circulation/stirring.



## Cooling

The pump circulates cooling water for use in the electrolysis process.

Resin pumps are suitable because seawater is often used for this purpose.



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IWAKI has global net work. Please find your distributor location at

[www.iwakupumps.jp](http://www.iwakupumps.jp)

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| The Netherlands      | : IWAKI Europe GmbH (Netherlands Branch) | TEL: (31)74 2420011    | FAX: (49)2154 925448 |
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| Belgium              | : IWAKI Belgium N.V.                     | TEL: (32)13 67 02 00   | FAX: 12 347 0900     |
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| Sweden               | : IWAKI Sverige AB                       | TEL: (46)8 511 72900   | ( )Country codes     |

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**Caution for safety use:** Before use of pump, read instruction manual carefully to use the product correctly.

Actual pumps may differ from the photos. Specifications and dimensions are subject to change without prior notice. For further details please contact us.

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