



# SAFE. PROVEN. INNOVATIVE.

CSL has an impressive track record of providing high capacity, reliable, cost effective and environmentally sound transhipment services to mining companies around the world.

  
CSLSHIPS.COM

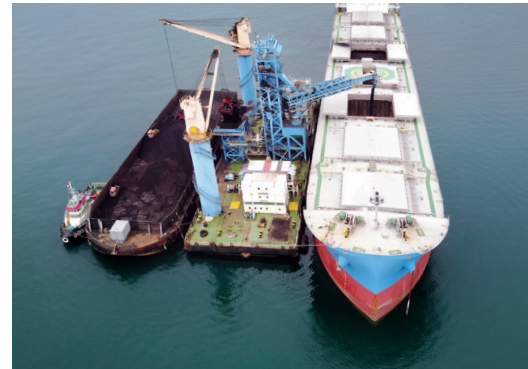
By combining proven gravity-based cargo handling technology with 100 years of operating experience, we will provide you with the reliability and productivity you require from your transhipment operation.

**CSL TRANSHIPMENT** Reliable High Capacity Transhipment Systems Worldwide.





# HIGH CAPACITY TRANSHIPMENT SOLUTIONS.



## FACTORS DRIVING DEMAND FOR HIGH CAPACITY TRANSHIPMENT

- New supply areas for commodities;
- Lack of natural deep water ports;
- Environmental impact of dredging and deep water port construction;
- Dramatic advances in transhipment system capabilities.

## A PARTNER AT EVERY STEP

CSL supports mining companies from the pre-feasibility study phase and throughout the life of the mine. In the initial phase, CSL conceptualizes transhipment solutions and provides a comprehensive analysis of productivity, throughput, lead time, risk and cost.





## OUR TRANSHIPMENT CAPABILITIES

CSL has adapted its gravity-based self-unloading technology to meet the rigorous requirements of high-volume transshipment. Our transshipment systems are designed and built to meet or surpass the highest safety and environmental standards.

We develop optimum transshipment solutions based on a combination of factors:

- Geography and port loading infrastructure;
- Throughput and productivity requirements;
- Distance from the port to the transshipment site;
- Water depth;
- MetOcean conditions;
- Cargo profile.

## BENEFITS OF TRANSHIPPING WITH CSL

### Low Cost

CSL's new generation of high capacity transhippers provide a dramatically improved value proposition compared with older, often crane-based, transshipment options. With superior productivity, increased capacity, simple shore infrastructure and reliability built right into the design, CSL provides high-value low-cost transshipment solutions.

### Limited Capital Expenditure

Transshipping with CSL means reducing capital expenditure on shoreside infrastructure and less maintenance dredging.

### Reduced Freight Cost

CSL can develop transshipment solutions for draft restricted ports, with as little as a five meter draft, performing offshore loading of export vessels up to 40,000 deadweight.

### Scalability

The modular and movable nature of transhippers provides inherent scalability and offers a realizable residual value once a mine comes to the end of its life.

### Limited Impact on the Marine Environment

CSL's transhippers are designed to minimize environmental impact:

- They require less or no dredging;
- Fully enclosed gravity-based cargo handling system eliminates risk of fugitive material;
- Their optimized design minimizes noise and vibration in both air and water.

### Fast and Efficient Loading

- CSL offers proven and reliable transshipment solutions with cargo transfer rates up to 10,000 tons per hour (TPH).

## SMART, GREEN AND SAFE

Experience, proven technology, innovation, and a corporate commitment to elevate safety and reduce the environmental impact of our operations are keys to CSL's success. Our highly effective transshipment solutions give clients around the world a competitive edge.

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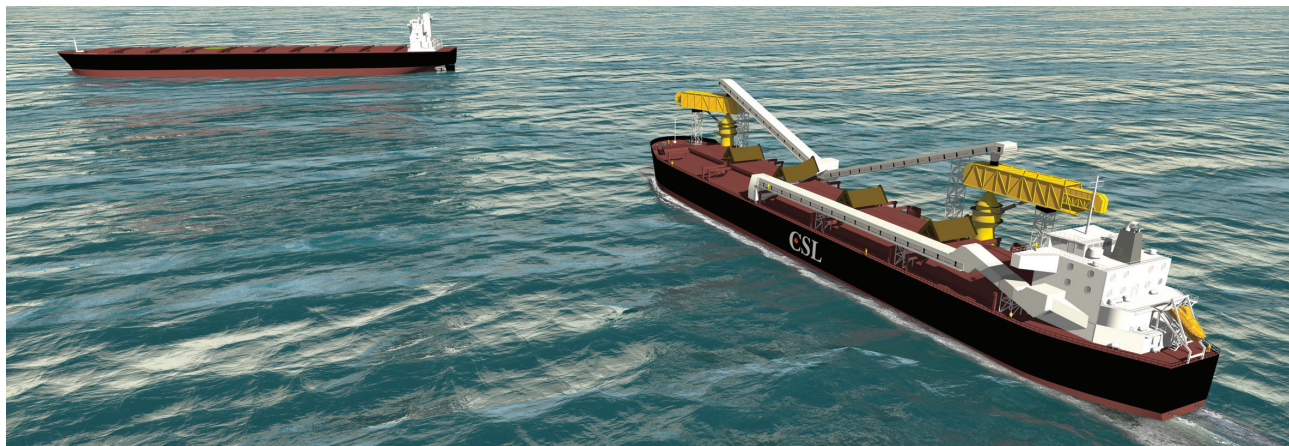
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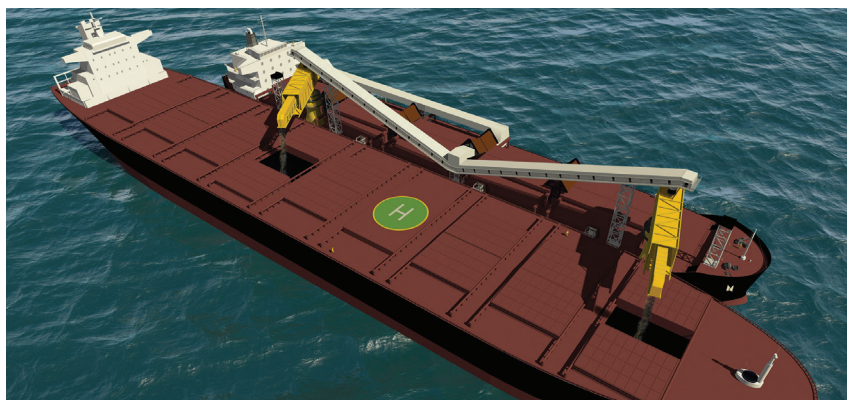
# CSL'S NEXT GENERATION TRANSHIPPER

## Introducing the High Capacity Gravity Transshipment Shuttle Vessel

Responding to customer demand for high capacity, cost-effective transshipment systems, CSL has developed a Gravity Transshipment Shuttle Vessel (TSV) that is setting new standards for productivity. With innovative use of proven solutions and technologies, CSL's TSV can tranship cargo at up to 10,000 TPH. The design concept allows all dimensions – length, beam and draft – to be adjusted to suit the requirements of any project. The TSV can range between 22,000 and 60,000 deadweight – or even smaller for severely restricted ports and rivers.



The Gravity Transshipment Shuttle Vessel does not require tug assistance when approaching an ocean-going vessel.



Dual conveyors and loading booms allow for the loading of two holds at once, minimizing shifting.

### CSL'S TSV IS DESIGNED FROM THE BOTTOM UP TO OFFER DISTINCT ADVANTAGES

#### Reliable in Remote, Intense Operations

- Robust equipment with low failure rates;
- Redundancy of critical equipment;
- Rapid repairability by crew.

#### Cost Effective

- Highly maneuverable and designed to operate without tug assistance;
- Appropriate automation level to reduce manning costs;
- High productivity.

#### Customer Focused

- Purpose designed as per cargo requirements;
- Optimized for the customer's infrastructure and local operating conditions;
- Broadens customers end markets by offering economies of scale.

## THE CSL GROUP

The CSL Group Inc. ("CSL") of Montreal, Canada is a world-leading provider of marine dry bulk cargo handling and delivery services. Through its major operating divisions, Canada Steamship Lines, CSL Americas, CSL Australia, CSL Asia, CSL Europe and CSL Transshipment, CSL owns and operates a highly diversified fleet of specialized self-unloading vessels, off-shore transhippers and handysize bulk carriers.

