

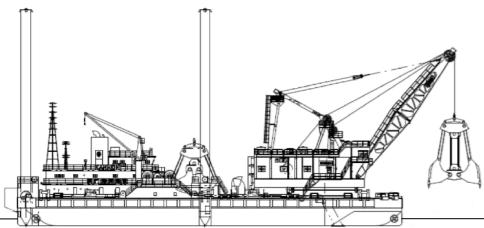
➤ **Extra-large grab dredger with hoisting load of 250 tons driven by diesel electric machine**

This is an extra-large grab dredger that boasts the world-largest size and top-class performance with maximum hoisting capacity of 250 tons and dredging depth of 100 meters. An ultra-heavy grab bucket weighing 200 tons shows its powerful excavating force in direct dredging, bedrock dredging and the crushing of concrete structures. The DE (diesel-electric) dredging machine and thyristor Leonard device enable advanced dredging control. With the addition of automatic sizing and horizontal excavation controls, highly accurate dredging is achieved. By utilizing those functions, grab dredger Kanmon has achieved excellent results in the construction of bridge pier foundations.



➤ **Secure mooring even in rapid tidal currents with large-scale mooring facility**

Double-drum windlasses with a braking force of 150 tons enable mooring in rapid tidal currents at the maximum of 9 knots, which has an advantage in enhancement of construction accuracy by safe and stable mooring as well as reducing the number of entering/leaving working area.



➤ **Demonstrating power in waterway dredging and work in narrow waters with tidal current resistant spuds**

Lightweight spuds made of high-tension steel enable mooring without using anchors at a water depth of 23 meters and a tidal current speed of 6 knots.

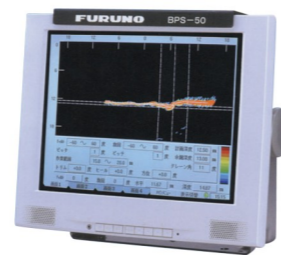
➤ **Two side thrusters**

High power side thrusters (6.5 tons at bow and 8.1 tons at stern) with adjustable pitch enable quick lateral motion and vessel positioning in a short time.



➤ **Dredging management system**

Dredging positions and conditions are displayed with the plan and cross-sectional views as well as sounding-map on the monitor on a real-time basis by GPS (Global Positioning System), BPS (Bottom Probe Survey sonar) and data processing activities of the dredger-related information.



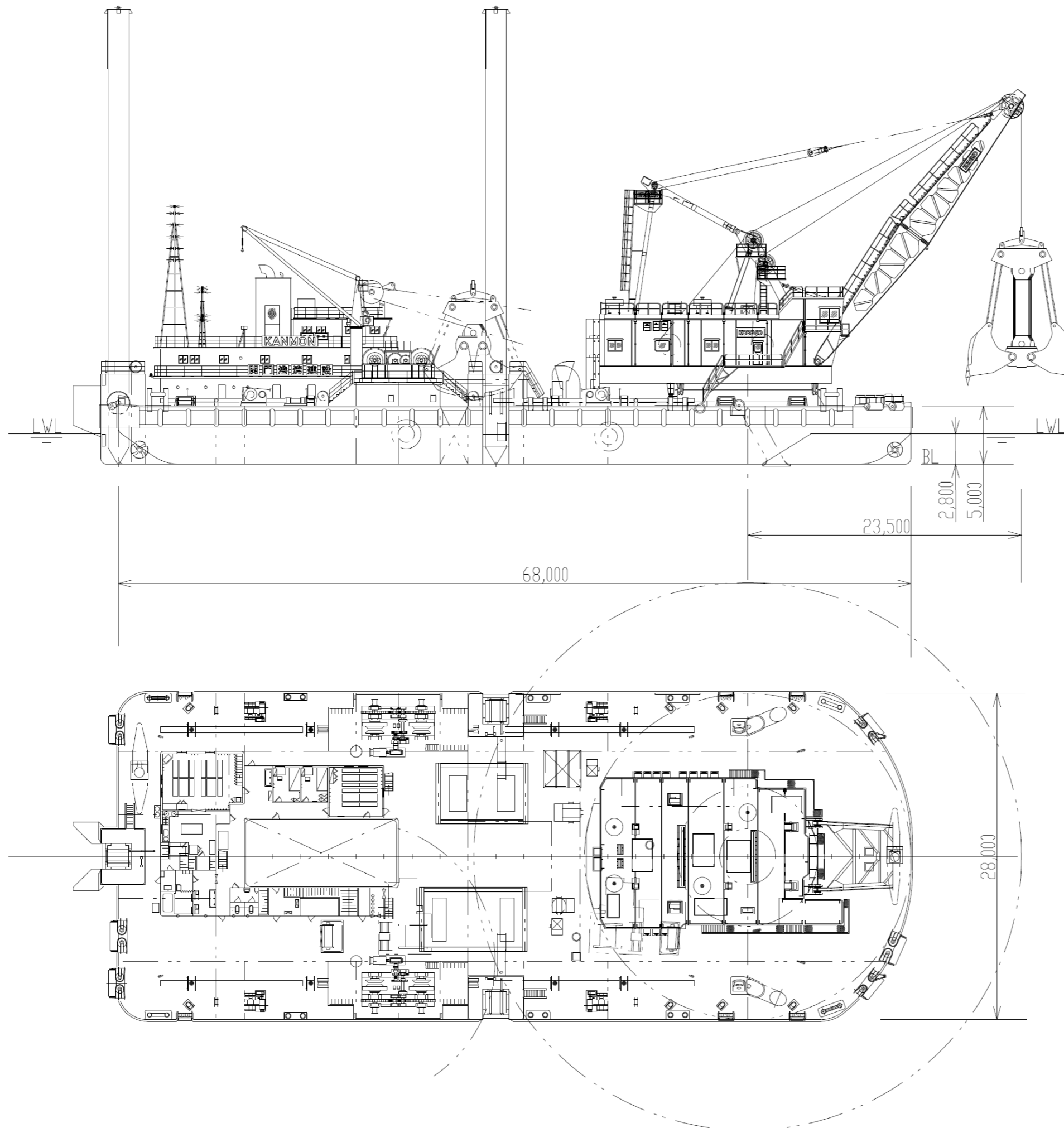
➤ **Quick entering/leaving working area and safe navigation with notch dedicated to pusher boat**

In an emergency, a pusher boat can be set at the dedicated aft notch to lead the dredger to shelter swiftly.

➤ **32.5m<sup>3</sup> Grab Dredger with an ultra-heavy bucket weighing 200 tons**

- Equipped with advanced controlling devices which show great performance in bridge foundation excavation with high finishing accuracy.
- Capable of dredging under deep waters up to 100 meters.
- Able to curtail the overbreak volume or deep digging by using a highly accurate management system.
- Spud mooring can secure the vessel without using anchors.





<b>HULL</b>		
<b>MAKER</b>	KOBEL STEEL, Ltd.	
<b>DIMENSIONS</b>	Length 68.00 m Breadth 28.00 m Depth 5.00 m Depth 2.80 m	
<b>DECK MACHINERY</b>		
<b>WINDLASS (DOUBLE)</b>	50t × 8m/min × 2 sets	
<b>MOORING WINCH</b>	10t × 10m/min × 4 sets	
<b>DECK CRANE</b>	1.9t × 9m/min × 2 sets	
<b>SPUD</b>	1.8m × 1.8m × 39m × 3 sets	
<b>SPUD WINCH</b>	35t × 10m/min × 3 sets	
<b>SIDE THRUSTER</b>	6.5t × 1set, 8.1t × 1set	
<b>STOCKLESS ANCHOR</b>	13t × 4 sets	
<b>ANCHOR CHAIN</b>	73mm × 450m × 4 sets	
<b>SINKER WIRE</b>	85mm × 400m × 2 sets	
<b>GENERATOR</b>		
<b>MAIN GENERATOR</b>	AC450V × 3,500kVA × 1set	
<b>PRIME MOVER</b>	3,678kW (5,000 ps) × 600 rpm × 1set	
<b>AUX. GENERATOR</b>	AC450V × 200kVA × 2sets	
<b>PRIME MOVER</b>	220kW (300 ps) × 1,800rpm × 2sets	
<b>DREDGING MACHINE</b>		
<b>MAKER</b>	KOBEL STEEL, Ltd.	
<b>HOISTING LOAD</b>	250t	
<b>OPERATING RADIUS</b>	23.5m	
<b>DREDGING DEPTH</b>	100m	
<b>LIFTING HEIGHT</b>	10m	
<b>HOISTING SPEED</b>	45m/min	
<b>LOWERING SPEED</b>	60m/min (below water)	
<b>LOWERING SPEED</b>	40m/min (above water)	
<b>GRAB CLOSING SPEED</b>	45m/min	
<b>GRAB OPENING SPEED</b>	60m/min	
<b>SLEWING SPEED</b>	0.8rpm	
<b>GRAB</b>		
<b>TYPE</b>	ULTRA HEAVY	MEDIUM
<b>CAPACITY</b>	17.5m <sup>3</sup> (WL)	32.5m <sup>3</sup> (WL)
<b>HEIGHT</b>	13.25m	14.80m
<b>BREADTH</b>	4.50m	4.70m
<b>BREADTH OF OPENING</b>	9.05m	10.70m
<b>WIDTH OF SHELL</b>	3.96m	3.90m
<b>WEIGHT</b>	200t	150t