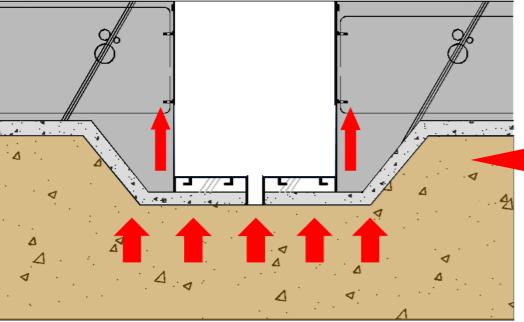
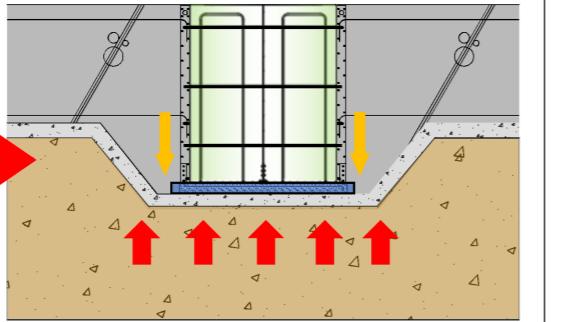
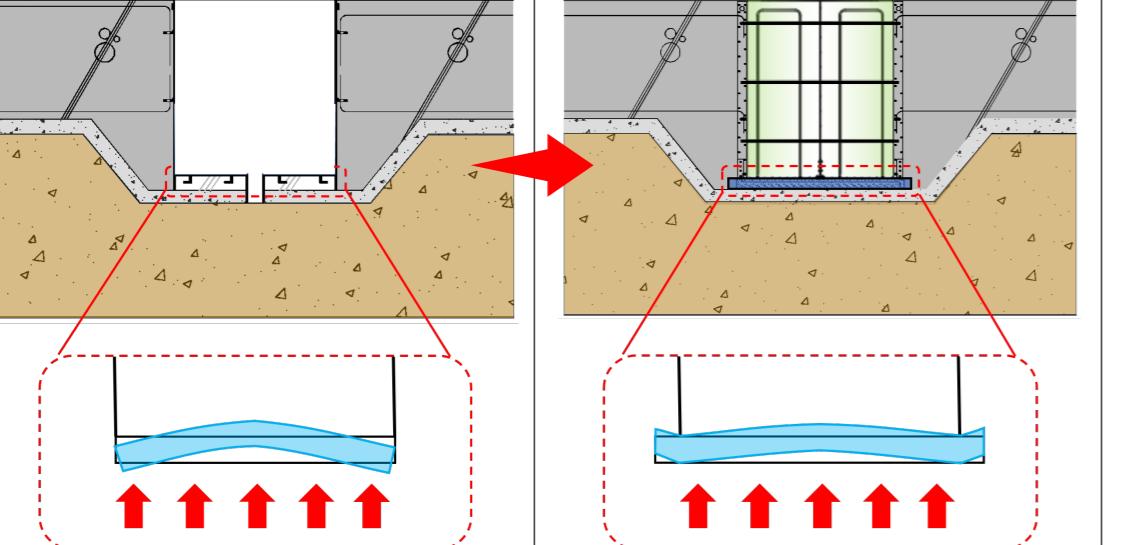
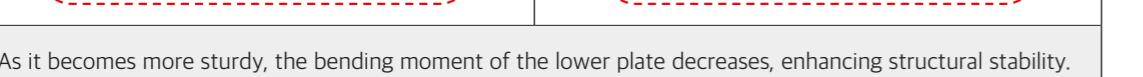
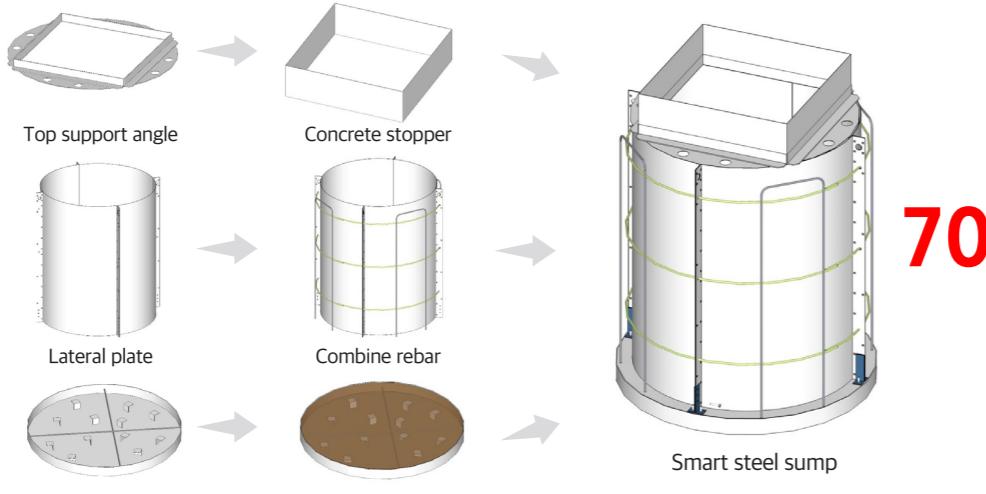
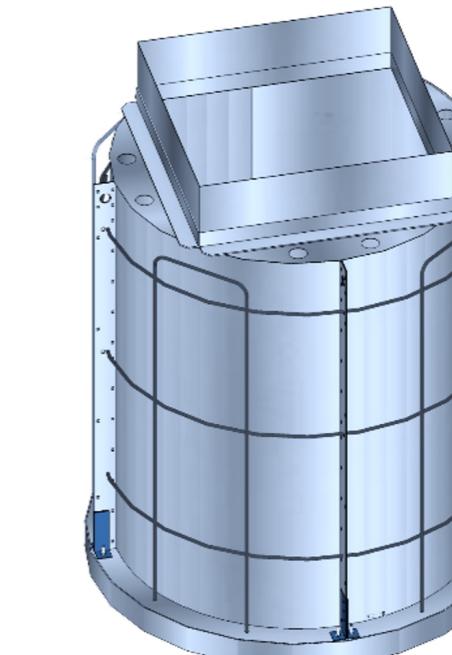


	Conventional Steel sump	VS	Smart Steel Sump
Bottom Plate			
Bigger bottom plate prevent slip and makes it sturdy			
Bending Moment			
As it becomes more sturdy, the bending moment of the lower plate decreases, enhancing structural stability.			
Production Process & Price	 <p>70%</p>		
Efficiency is achieved through modular design and prefabrication, cutting costs to 70% of the original.			



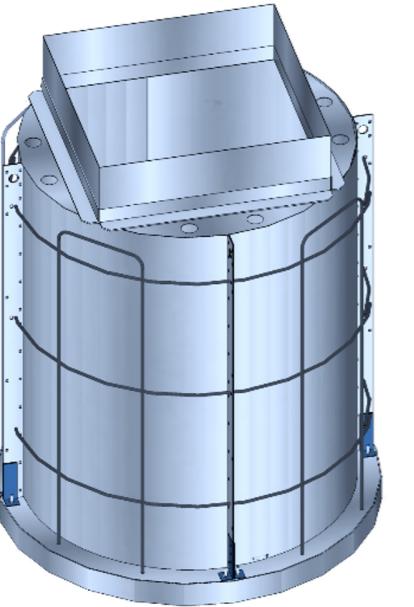


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Office of Constructional Key Technology/Structural Engineers

What's Smart Steel Sump?

The steel sump collects and drains rainwater or wastewater, offering enhanced construction efficiency and structural stability compared to traditional concrete sums



2025

1 Cost-effectiveness secured

Produced at approximately 70% of the cost compared to conventional products

2 Manufactured using eco-friendly methods

Excludes plastics and hot-dip galvanizing

3 Enhanced structural stability

[4 Types by Size]

A type: 1m³ / B type: 1.73m³ / C type: 3.38 m³ / F type: 8m³

2005



Ministry of Land,
Transport and Maritime
Affairs New technology
No.452

2001



Concrete Sump

"After launching in Korea, more than 2,500 units have been applied over the past 20 years."

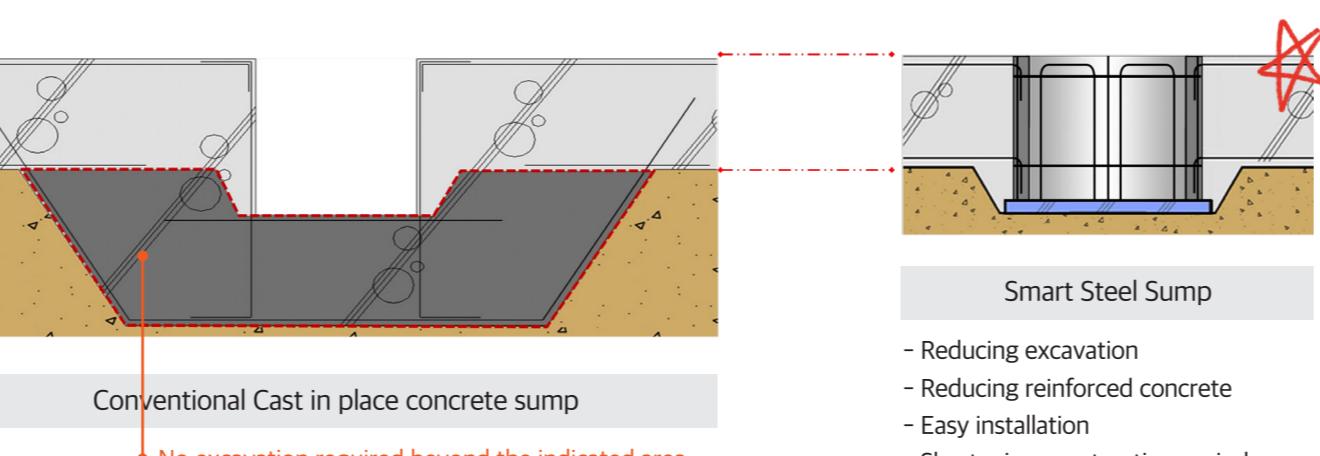
Concrete Sump vs Smart Steel Sump

- In rocky ground conditions, excavation is difficult and groundwater inflow degrades concrete quality
- Excessive rebar placement and excavation make construction complex, leading to labor and schedule losses



High rebar density increases construction difficulty

Difficult to install drainage pipes and high risk of pipe damage

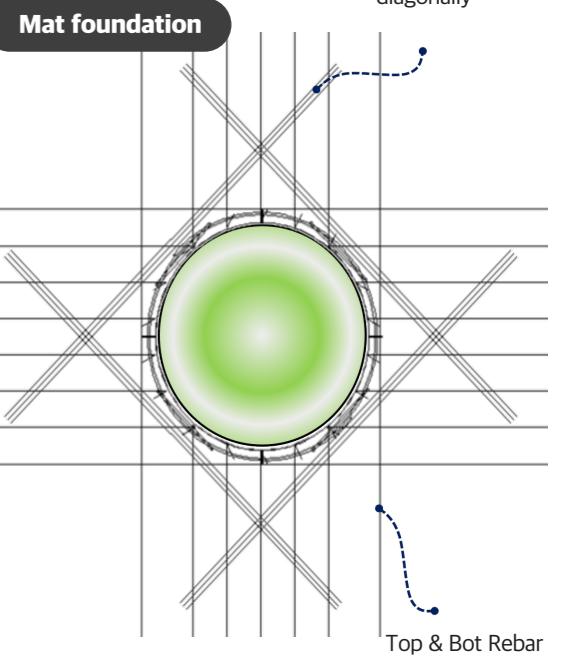
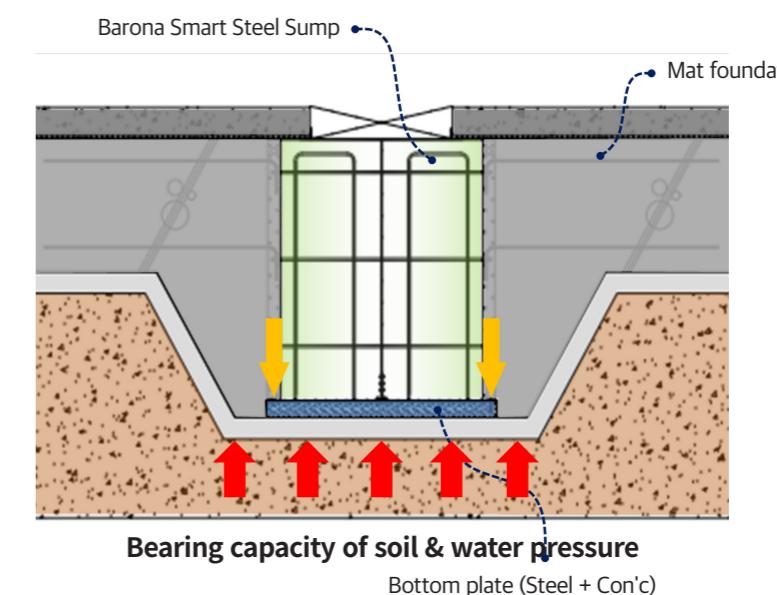


Smart Steel Sump

- Reducing excavation
- Reducing reinforced concrete
- Easy installation
- Shortening construction period
- Steel sump's capacity up to 18 m³

Structure and Principle of Smart Steel Sump

- Moment loads and shear loads are carried by the mat foundation.
- Opening around sump is reinforced with rebars.
- The bearing capacity of soil and water pressure are supported by the bottom plate of the sump, and mat foundation supports the bottom slab of the sump



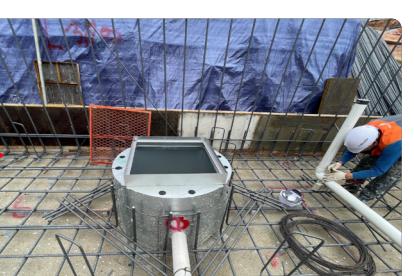
Installation Process



1. Manufacturing in factory



2. Transport & Delivery



3. Fix with Bottom rebar



4. Fix with Top rebar



5. Pour into mat foundation



6. Pump installation

Reinforcing the opening by rebar diagonally