



"AS GOOD AS YOU NEED IT"



Since mid 1990s
Alnal Electromechanics Co.
succeeded in many
railway projects.

Due to growing demand in
rolling stock market,
company seperated its
railway division and Alnal
Railway Systems Co. was
established in 2009.

In order to be a professional
rolling stock supplier,
company started quality
processes and has been
awarded with EN 15085-2
[CL-1] and EN ISO 3834.



Our Profile

Our firm, established in 1980, not only serves the production sector with its activities in the area of machine production, but it has also come to be renowned in the metal sector for its department of sheet metal processing set up in 1995. **ALNAL**, having transferred its experience to several other sectors, has intensified its activities in the production of auxiliary equipment for the railway sector, which has been evolving rapidly both in our country and the world, under the brand **ALNAL RAILWAY SYSTEMS**.

We have successfully produced vacuum toilet systems, heating units, high voltage and battery boxes, chassis for air conditioning units, boxes for distribution of electrical energy, all of which have proven to be pretty important for the leading firms specialized in the production of railway equipment.

With its qualified, knowledgeable and dynamic workforce and its quality management specifics continuously aiming for the better, **ALNAL** is determined not to deviate from the course of its projects described above and to contribute to the synergy of the railway sector.

Vacuum Toilet Alafranga



Vacuum Toilet System

The vacuum toilet system is a type of hygienic toilet, which has turkish style and europen style models, which collects the wastes at the storage in its body and prevents significantly the environmental pollution, which can clean it self with its aconomical water, which runs with vacuum and pressure system, and which is suitable for using in the rail, air, maritime and road sectors.

Applying the vacuum toilet system needs compressed air, 24V DC energy and water that are present in all possible transportation vehicles.

The system is formed by being combined the pneumatic, hydraulic and electronic systems.

Water consumption of average 10 liters for single use in the normal system falls to 0.5 liters in the

system that we've created, including cleaning the toilet bowl.

For the hygienically reasons, all metal equipments to be used was manufactured from AISI 316 quality stainless steel.

Major Advantages;

- Low water consumption
- Sensitivity to the human health and environmental pollution
- To be the original design of the Project
- Compliance with islamic rules with its bidet system
- To be the only domestic production in our country and to prevent import
- Easy availability of spare parts.

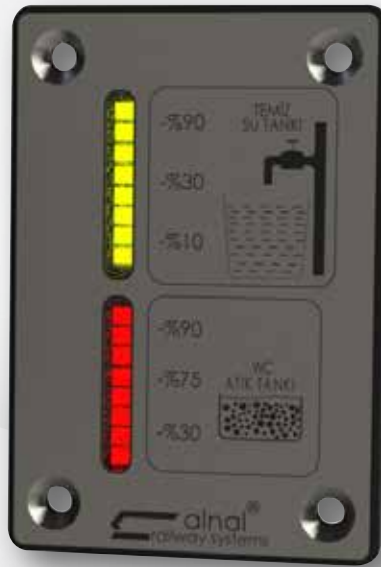
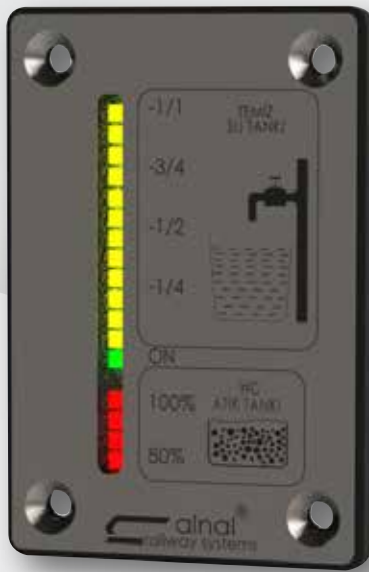
Vacuum Toilet Alaturka



Main technical parameters

Air Supply Pressure	5 to 10 bar
Working Water Pressure	0.1 to 1.5 bar [bidet function min. 1 bar]
Number of Release Nozzles	3
Vacuum	~0.6 bar
Overpressure	~1.5 bar
Air Consumption	~20 liters / cycle
Water Consumption	0.25 to 0.5 liter / cycle
Weight	~21 kg
Dimensions	531x459x367
Interface	Water : Ø8mm tube coupling - Air : Ø10mm tube coupling - Water outlet : Ø41mm
Electric Power Supply	16.8-32V DC
Electric Power	~20W [~5W standby]
Temperature	-20°C to +60°C
Working Temperature	2°C to +60°C
Valves	Pinch Valves
Casing, Seat and Cover	Antiseptic Laminate
Control System	Dispersed Module + Main Controller
Intermediate Tank	AISI 316 acid resistant steel
Lavatory Pan	AISI 316 acid resistant steel
Mounting	Screws M6x15

Level Indicator



Warning Lights



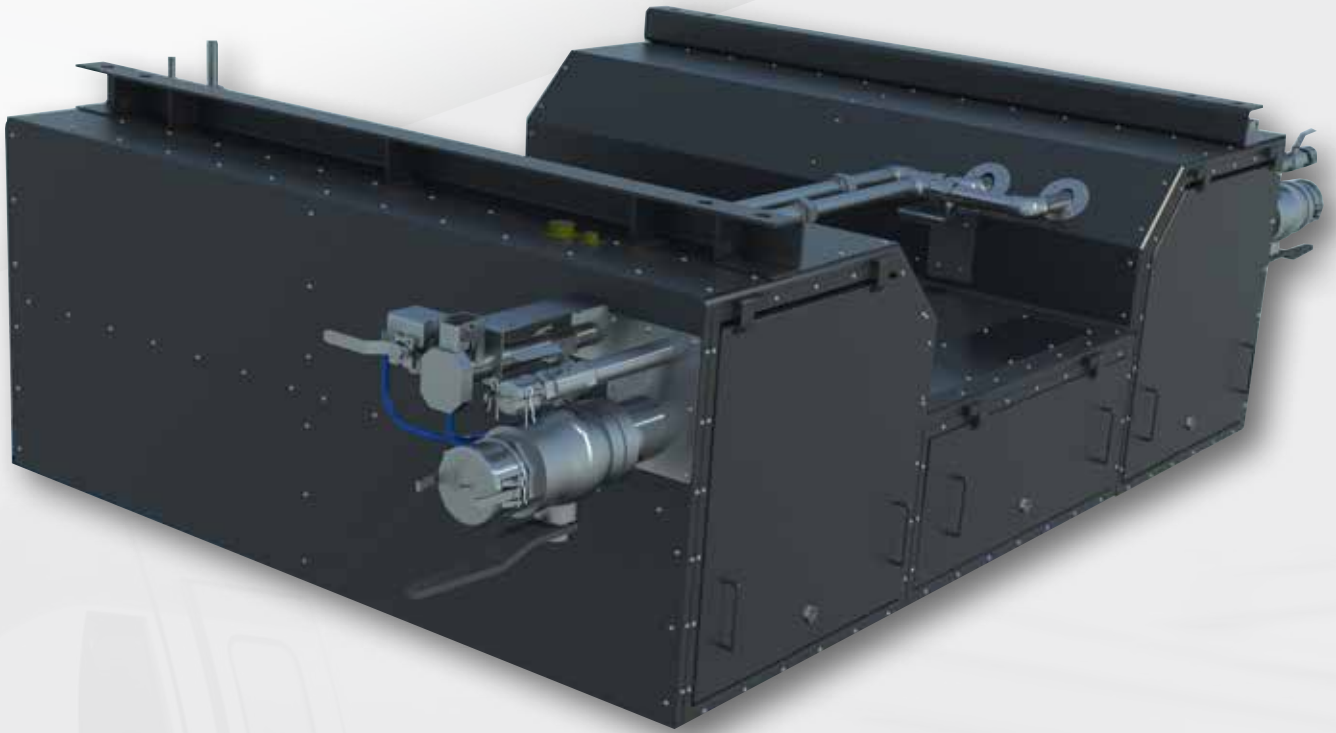
Fresh Water Level Sensor



Level Sensor



Water & Sewage Tanks



Battery Box



Converter Box



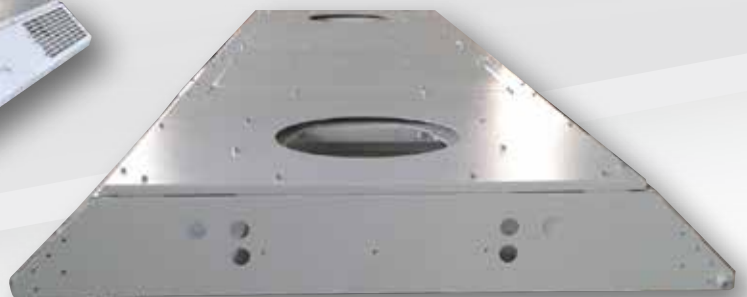
Converter Box



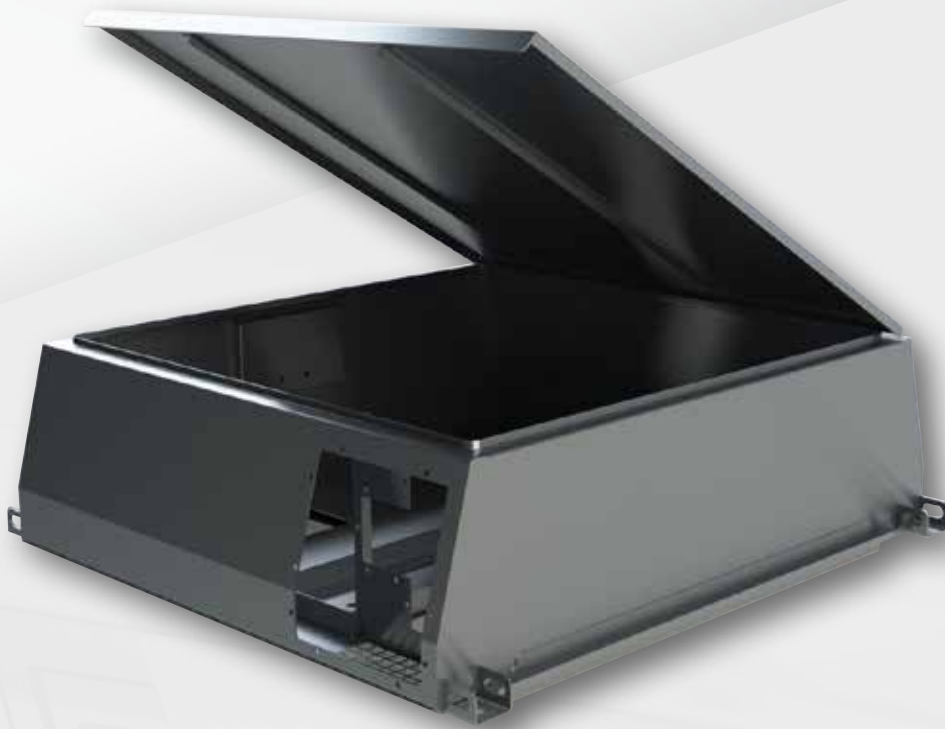
Converter Box



Hvac Air Condition Chassis



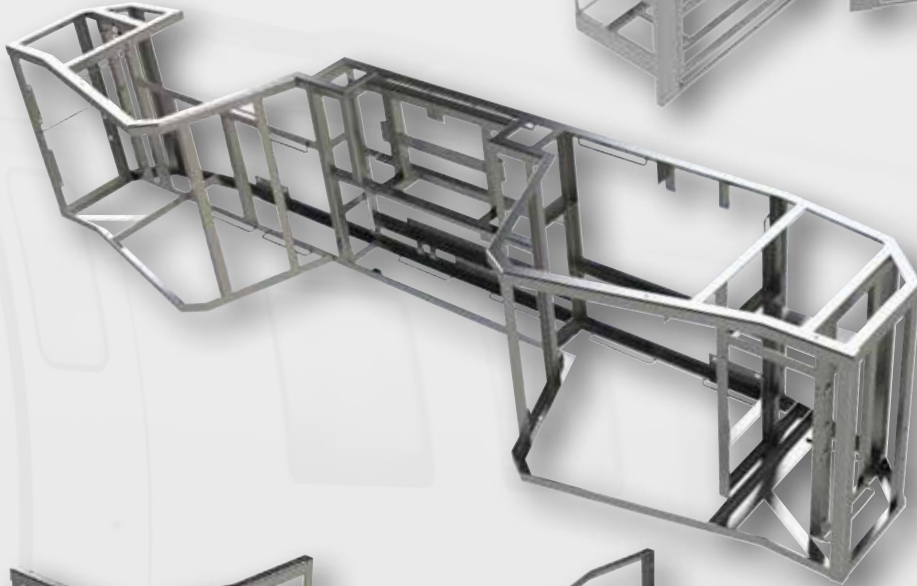
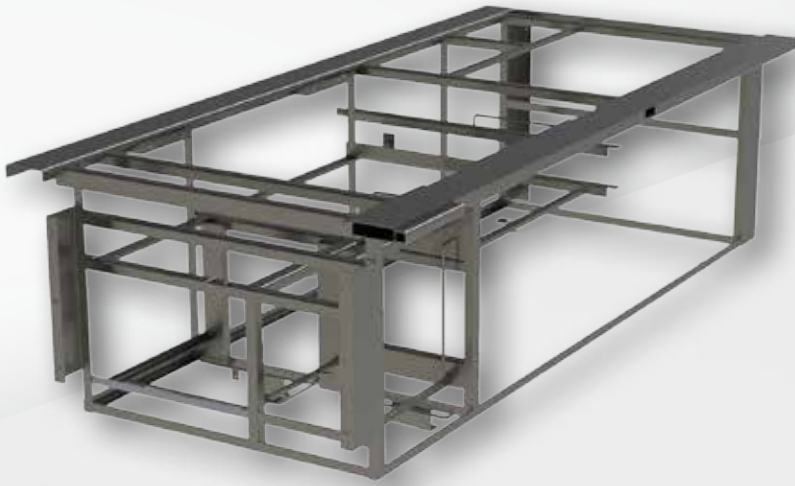
Hvac Air Condition Chassis



Cable Duct & Extension Supply Receptable Box



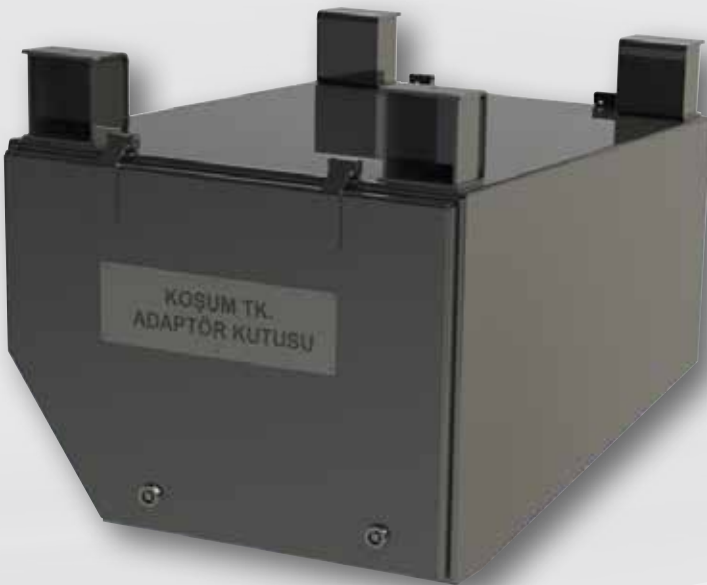
Interior Frames



Compressed Air Tank



Sanding Box



High Voltage Control Box



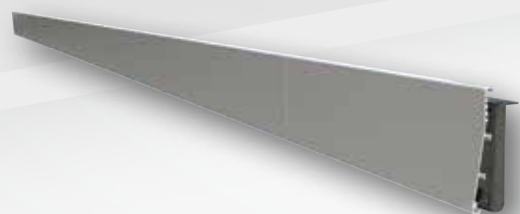
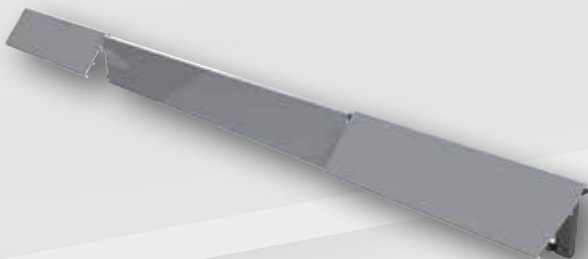
Hvac Underframe Heating Unit



The Air Condition Duct Of Compartment



Skirt Panel



Our Certificates



ISO 9001 : 2008
DIN EN 15085-2 CL-1
DIN EN ISO 3834-2
EN 286-3 : 1997
EN 286-1 : 1998





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