



Albayrak Makine Elektronik
Sanayi ve Ticaret A.Ş.

Advertisement Presentation

Vision-Mission

Vision

To become a global brand in the rail system industry.

Mission

- To design, manufacture and maintenance of PSD and train gate systems.
- To carry out design, production and maintenance activities in accordance with international standards.
- To get jobs from national and global institutions and/or to carry out joint projects.
- To contribute to nationalization through domestic design and production activities.

Our Field of Activity

- Platform Screen Door Systems

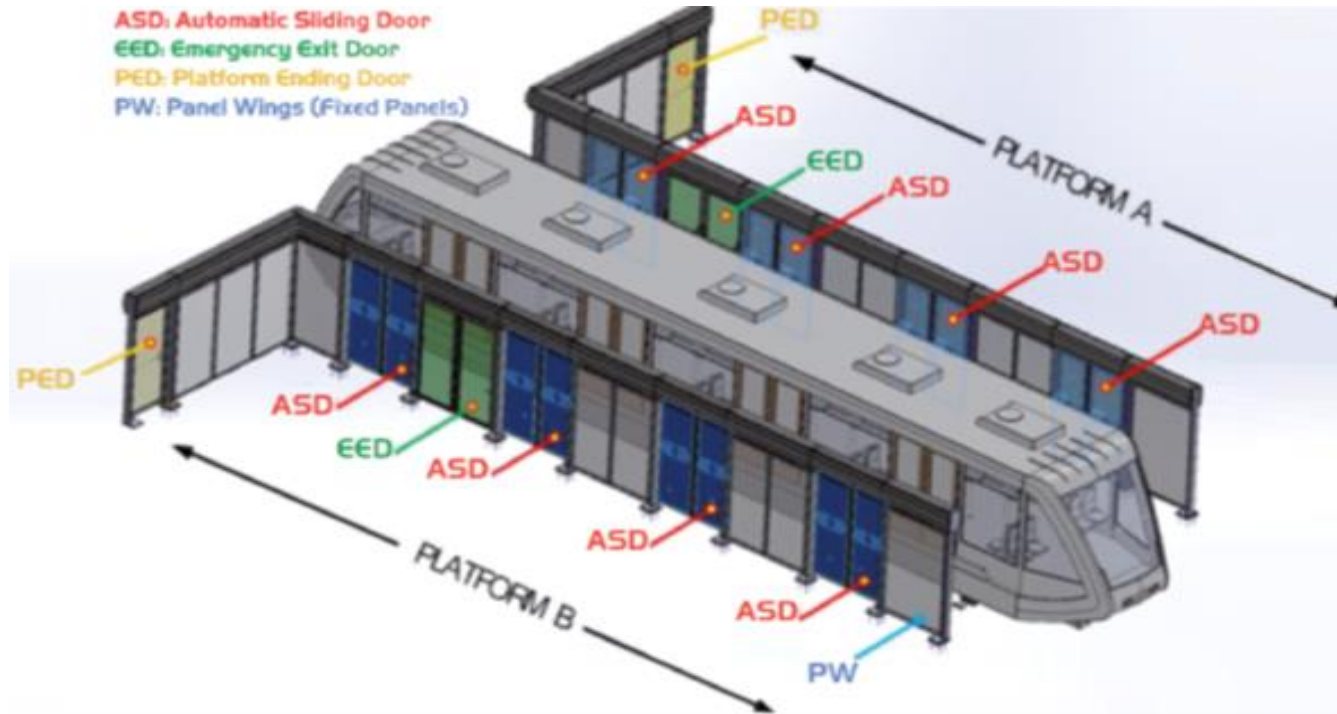


- Metro, Tram and Train interior and exterior door systems



PSD General Introduction

(PSD-Platform Screen Door)



PSD Types:

1. Half height (1.0-1.7 m)
2. Full height (2.0-2,5 m)
3. Closed full height (closed at the top, integrated with the ceiling)

General Technical Features

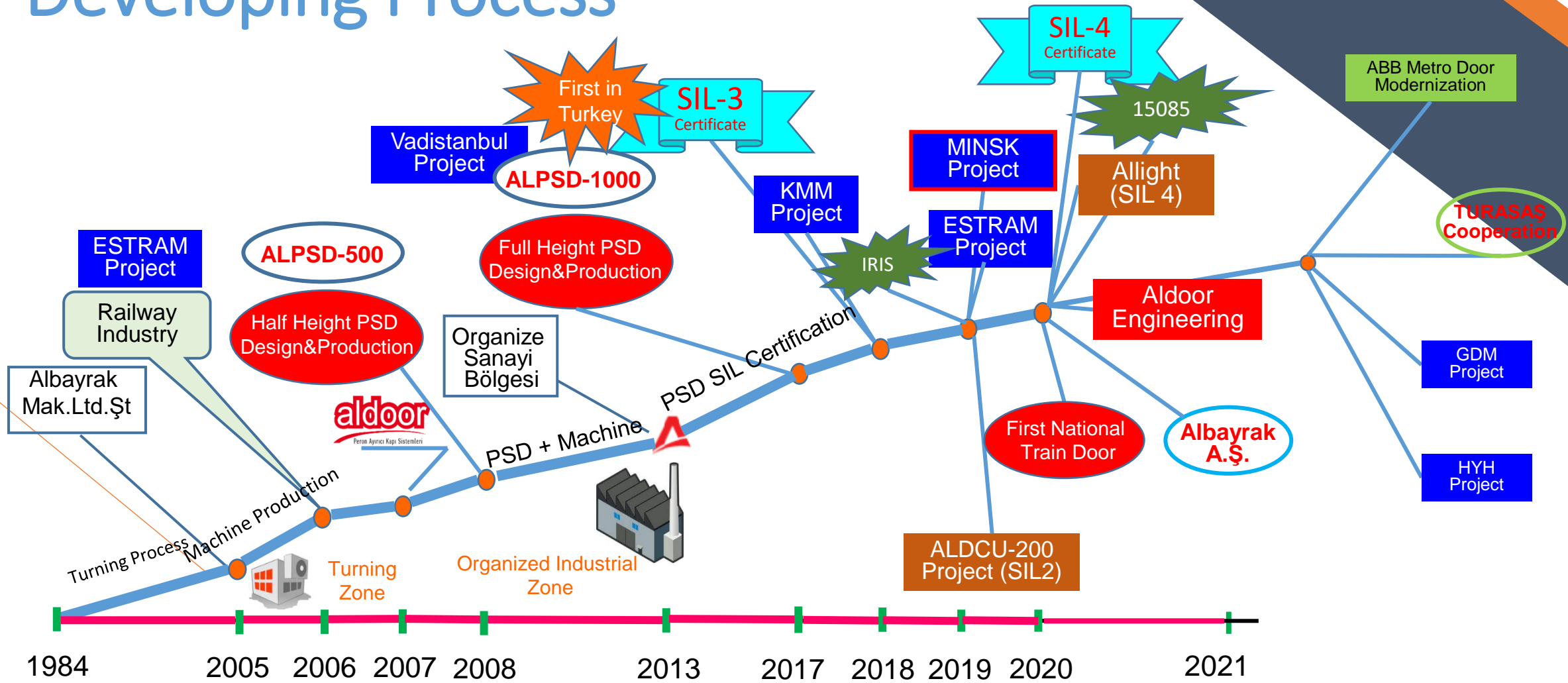
- Separating the passenger waiting area and rail line from the platform,
- Preventing the contact of the train in motion and the passenger which wait on the platform,
- It has safety functions that will prevent the passenger from entering the rail line voluntarily / unintentionally,
- It is a technological product where sliding doors are controlled electronically and all doors are monitored including emergency exit and platform ending doors.



Requirement of Use

- PSD application is mandatory in driverless metro lines (GoA4).
- Increasing passenger safety at stations,
- 75% reduction in suicide attempt fatalities and accidental railroad injuries,
- The possibility of increasing the speed of the vehicle at the entrance and exit of the station,
- Decreasing platform noise level,
- Preventing dust and particle transport to the platform,
- Increasing the platform announcement quality,
- Strengthening security (preventing access to the train line and tunnel),
- Elimination of driver error with automatic train use,
- Creating an aesthetic image and advertising space on the platform,
- Ease of creating climatic comfort,
- Saves energy used for ventilation.

Developing Process



Developing Process

- In July 1984, ALBAYRAK Torna started to work, with the initiative of the late Osman Albayrak, in 65 m2 workshop in Eskişehir Sanayi Carsisi, Ates Sokak.
- In 2005, ALBAYRAK Torna took the name as ALBAYRAK Makine İnşaat Sanayi ve Ticaret Ltd. Şti. and moved to the Tornacılar Sitesi and continued to produce various machines.
- In 2006, entered the rail sector and realized the design and manufacturing of Half-Length PSD. (Platform Screen Door Systems).
- In 2007, received the **aldoor** brand for the Platform Screen Door Systems.
- In 2008, manufactured and applied Half Height PSD (ALPSD-500, 500 pieces) for ESTRAM Project (Eskisehir/Turkey).
- In 2013, moved to Organized Industrial Zone and continued to PSD and machinery production.
- In 2016, launched the Full Size PSD (ALPSD-1000) design and manufacturing process for the Vadistanbul Project, as well as the SIL certification studies for ALPSD -1000.
- In 2017, delivered the ALPSD-1000 PSD system to Vadistanbul.

Developing Process

- Breakthroughs is 2016 and 2017 continued in 2018. **In 2018;**
 - Albayrak took the first SIL-3 Certificate in Turkey for PSD system (ALPSD-1000 PAKS SIL-3),
 - Albayrak started to manufacture PSD to Istanbul KMM (Kabatas-Mecidiyekoy-Mahmutbey) metro line,
 - Became a member of the RSC (Rail Systems Cluster) and ARUS (Anatolian Rail Transport Systems) clusters,
 - ALBAYRAK MAKİNE acquired to produce electronics units.,
 - The company participated in the international trade fair of Innotrans,.
 - Established the R&D center within the Technopolis of Osmangazi University.
- **In 2019;**
 - started to design and engineering of ALDCU-200 Door Control Unit and SIL certification,
 - completed additional 490 Half Height PSD for ESTRAM Project,
 - realized special design Half Height PSD for Belarus Minsk Metro Project.

Developing Process

- **In 2020;**
 - Received SIL4 certification for ALPSD-1000.
 - Started design, production and SIL4 certification studies for “allight” signal system lamp.
 - Received EN 15085 welding certification.
 - Founded the first foreign (Belarusian) company, Aldoor engineering.
 - Received the Technological Product Certificate for ALPSD-1000.
 - Commissioned SAP infrastructure.
 - It became ALBAYRAK Makine Elektronik Sanayi ve Ticaret Anonim Sirketi by taking the title of Incorporated Company.
 - Received the Investment Incentive Certificate.
- **In 2021;**
 - M5 maintenance service
 - M7 maintenance service
 - ABB metro gate modernization project has been launched.
 - ESAT (Evacuation Stop Analysis Tool) software program has been developed and started to be used.
 - GDM (Gebze-Darica Metro Line) PSD project has been launched.
 - HYH (Halkalı New Airport Line) PSD project has been launched.



- ✓ Ideal Solution
- ✓ Energy Efficient
- ✓ SIL Certified



KMM Project

2020

- 15 Stations
- 960 ASDs



Minsk Project

2019

- 4 Stations
- 320 ASDs



Vadistanbul Project

2018

- 2 Stations
- 16 ASDs



ESTRAM Project

2013

- 83 Stations
- 990 ASDs



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ISO 9001 - CE - GOST - EN 15085 - SIL4



Completed PSD Projects

ALSPD-500 HALF HEIGHT PSD

Operator in Use : ESTRAM A.Ş.

City : Eskişehir/Turkey

Number of Stations : 83 Stations

Number of Sliding Doors : 990 Pieces

1st Delivery : 2013

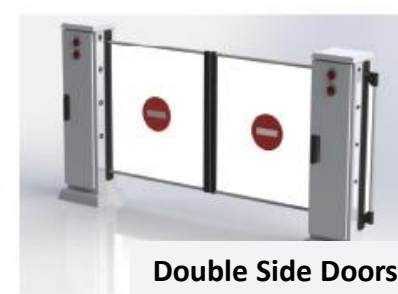
2nd Delivery : 2014

3rd Delivery : 2015

4th Delivery : 2019



Single Door



Double Side Doors

Completed PSD Projects

ALPSD-1000 FULL HEIGHT PSD

Operator in Use	: BARTHOLET
City	: İstanbul/Turkey
Number of Stations	: 2 Stations
Number of Sliding Doors	: 16 Pieces
Delivery	: November 2018



Completed PSD Projects

ALPSD-1000 HALF HEIGHT PSD

Operator in Use	: MINSK Metro
City	: Minsk/Belarus
Number of Stations	: 4 Stations
Number of Sliding Doors	: 160 Pieces
Delivery	: December 2019



SIL 4



Completed PSD Projects

ALPSD-1000 FULL HEIGHT PSD

Operator in Use	: Metro İstanbul-KMM Line
City	: İstanbul/Turkey
Number of Stations	: 15 Stations
Number of Sliding Doors	: 960 Pieces
Finished on	: February 2020



SIL 4



On-going Activities

M1 Line ABB Metro Vehicle Door Modernization





Our Products

Our Products

Train Interior Door (ALBID.100)



Our Products

Metro Exterior Door (ALBSD.200)



Our Products

ALDCU-200 Door Control Unit

- Domestic-National-Safe

- Electronical Design
- Software
- Production
- Safety Functions
 - EN 50126
 - EN 50128
 - EN 50129



EN 50126: Railway Applications - The Specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS) - Part 1: Generic RAMS Process

EN 50128: Railway applications - Communication, signalling and processing systems - Software for railway control and protection system

EN 50129: Railway applications - Communication, signalling and processing systems - Safety related electronic systems for signalling

Our Products

Signal Light

- Partial malfunction information,
- Critical malfunction information,
- SIL 4



abag
MÜHENDİSLİK A.Ş.

ALTLM-100
TRAFFIC LIGHT MODULE

LED Teknolojili Demiryolu Sinyalizasyon Lambası

Dinamik Led Kontrolü

6 LED Emniyet Konsepti

aLLight
TRAFFIC LIGHT MODULE

*Demiryolu Sinyalizasyonu için özel tasarlanmış SIL sertifikalı trafik lambası modülü.

Emniyet Konsepti EN50129

Mercek Yapısı Fresnel Lens

Test Altyapısı Başlangıç Testi Periyodik Self Test

Voltaj Uyumluluğu 220Vac 120Vac 72Vdc 24Vdc 12Vdc

Omür Beklentisi +5Yıl

Çalışma Koşulları Çalışma Sıcaklığı -40C° / +70C° Koruma Sınıfı IP65

SIL

CENELEC EN 50129 SIL 4

— Parlaklık Kontrolü

— Voltaj Seviye Kontrolü

— Akım Kontrolü

— 4 Renk Opsiyonu

— Açma Kapama Fonksiyonu

Commercial Certificates



Utility Model Certificate



SIL 3 Certificate (PSD)



Quality Management System



SIL 4 Certificate (PSD)



Domestic Goods Certificate (PSD)



TUR Certificate of Experience (PSD)



Welding Certificate



SIL 4 Certificate (Signal Light)



CE Certificate (PSD)



SIL 2 Certificate (Door Control Unit)

Albayrak Makine Elektronik Sanayi ve Ticaret A.Ş.
ESKİŞEHİR/TURKEY

Software

Software Used in Design, Analysis, Verification and Management Processes



ReliaSoft.

- Weibull++
- Blocksim
- RCM++



References



EZE
İNŞAAT A.Ş.



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