



Quality is never a coincidence



in Wiesbaden
Hessen Germany

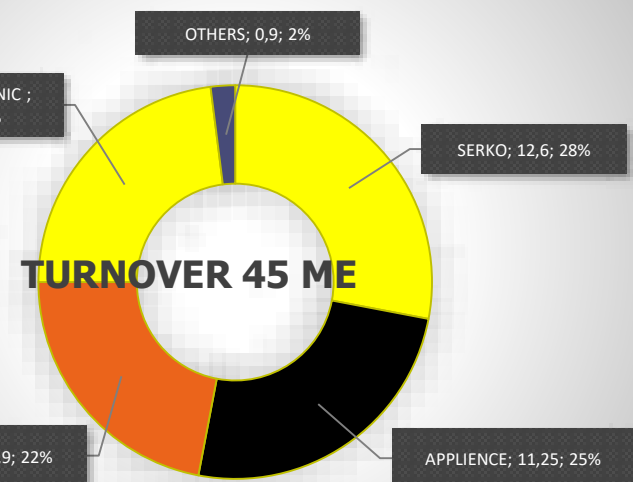




ABOUT US



- 3 factories in Ankara 1.OSB Sincan (E4 will be start to the production in 2019)
- Total closed area 24.000 m² with 450 employees (excluding E4)
- > 200 Customers all over the world
- About 50 patents application





SERDAR PLASTİK®
industry and trade co. inc.

SERKO®

SERKO FLEX®

SERKO MAGNET®

SERKO FLOW®

Working Industries



Appliance



Thermatechnic



Off-Road Vehicle



Automotive



Brake System



Telecommunications



SERKOFLEX®



Counters



Electronic



Cosmetic - Medical



Defence



Aerospace



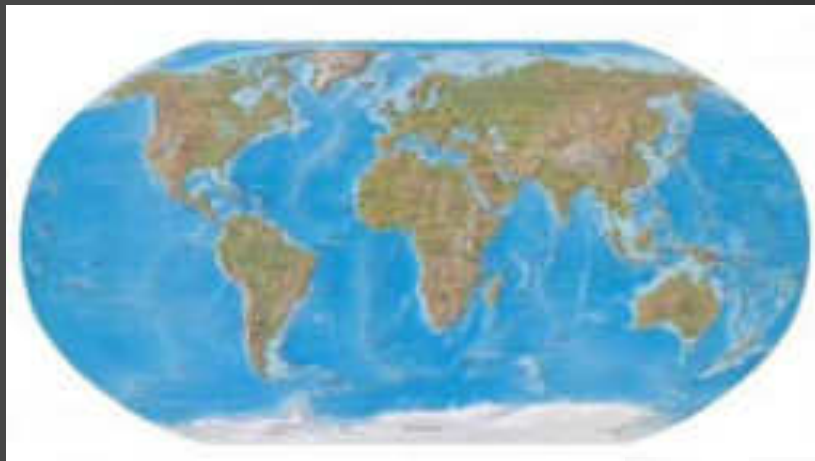
Aviation





REFERANCES

5 Continents
>65 countries





Awards



Simultaneous Engineering with  *in 1996*



Awards



2012



2013



2014



2015



2016



2017-8





Awards



2016

LEAD THE CHANGE

SERDAR PLASTİK SAN. VE TİC. A.Ş.

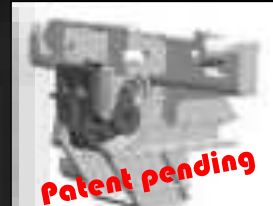
Thanks for

- . Creating innovative and result-oriented designs in dishwasher goods that lead to higher Arçelik customer satisfaction and more competitive products
- . Sharing technical know-how in new products developments

DEĞİŞİMİ YÖNET

SERDAR PLASTİK SAN. VE TİC. A.Ş.

Bulaşık Makinesinde gerçekleştirmiş olduğu inovatif ve çözüm odaklı tasarımlarıyla üründe rekabet ve müşteri memnuniyetini arttırmaları; yeni projelerde paylaştıkları teknik deneyim ile fark yaratmasında dolayı ödüle layık görülmüştür





Awards



Supplier Award of



in 2011



Awards



2018



HISTORY





HISTORY



- 1998 Starting to design SERRO products
- 1999 First 2K stop lens is produced
- 1999 Starting to sell SERRO products, completely new design and patented for off-road vehicles
- 2003 ISO/TS16949 Certification
- 2003 Starting to the construction of E2
- 2004 Starting to invest full electrical injection molding machine
- 2004** E2 factory has started to work (total area 12,000 m²)
- 2004 Establishment of MOLDECH and GROUPTech
- 2006 Starting to the construction of E3
- 2008** E3 factory has started to work (total area 24,000 m²)
- 2008 Starting the metallization, painting and hard coating processes
- 2009 Photometric laboratory is established



HISTORY



2008

SPAS

2009

ISO14000 & DINSA518000 Certification



2011

Moving the moldmaking department to E2

2012

5 Axis machining for moldmaking in Moldtech



2013

The construction plan of E4

2013

3D Process design and optimisation



2014

Fluid Life test laboratory will be established



2018

E4 factory will start to work in 2019 (total area 36,000 m²)

2019

Establishment of SERKO GmbH Wiesbaden GERMANY



PRODUCTS

SERKO®

SERKO®



1975



2019





PRODUCTS

SERKO®



Column switch arm



Working Lamp



Beacon Lamp



Front & Rear lamp



Registration plate lamp



Tool box



Switch box



Interior lamp



Reflector



Knob



Head lamp



Switch

NEW

MD SWITCH ARM SERIES

SERKO®



esthetic



interchangeable



Full sealing



IP56



SQ100 CP WORKING LAMP LED

SERKO[®]

NEW



IP67

FDL140 LED BEACON LAMP

SERKO®

NEW



TR150 LED DIRECTION LAMP EU

SERKO[®]

NEW

IP67 Waterproof

Pipe Mounting

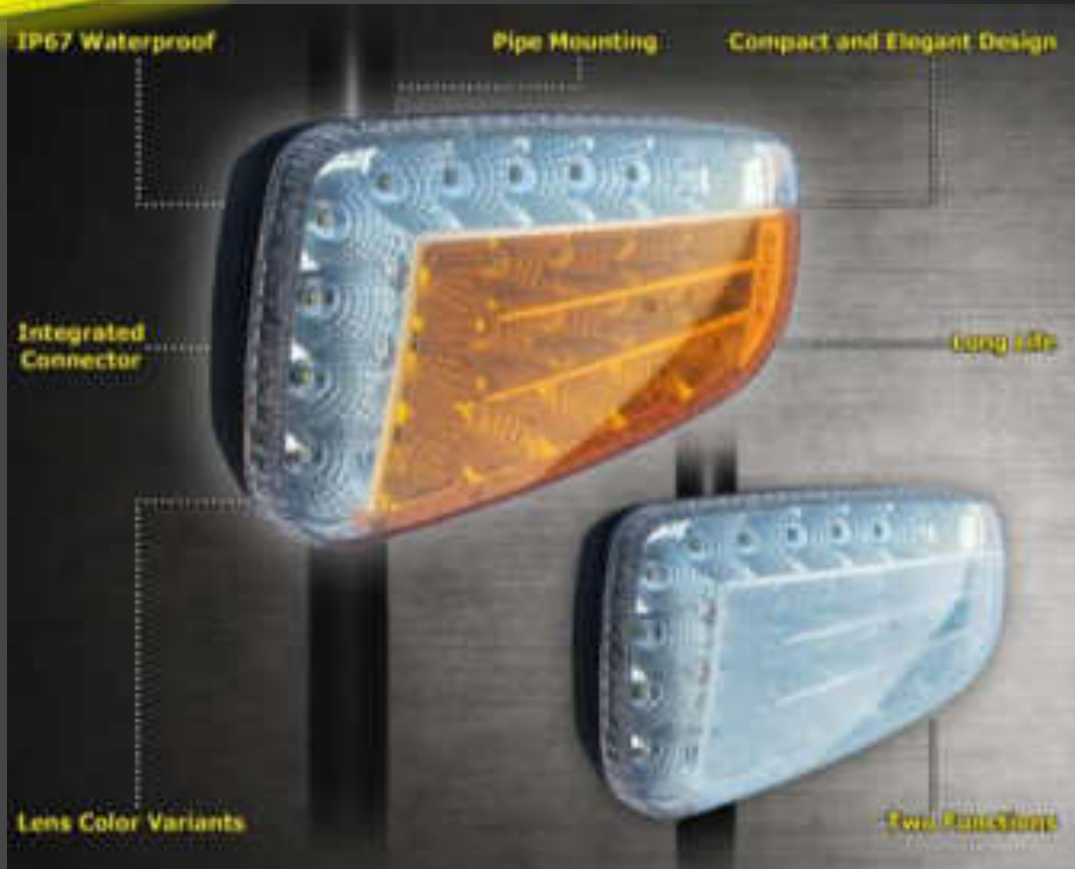
Compact and Elegant Design

Integrated Connector

Long Life

Lens Color Variants

Two Functions



CR120 LED STOP LAMP

NEW

SERKO®

								
Park Stop Sinyal EU	Park Stop Sinyal EU	Park Stop Reflektör EU	Park Stop Reflektör EU	Sinyal NASO	Sinyal NASO	Park Stop NASO	Geri Vites	Sis
Fonksiyon : Park, Stop, Sinyal, Reflektör				Yüksek sızdırmazlık özelliği				
Çalışma Voltajı : 12V - 24V				Kompakt ve sık tasarım				
Aydınlatma Tipi : LED				Renkli lens seçenekleri				
Kısa Konnektör : 282088 AMP Supraseal 1.5 Serisi 4 Pozisyon Priz				Entegre konnektör				
Koruma Sınıfı : IP68				Özel optik tasarım				
Tip Onayı : ECE R7 - ECE R6 - ECE R10 - ECE R23 - ECE R38				Uzun ömür				
SAE J2261 - SAE J585 - SAE J588								
Ağırlık : ~250g								
Boyutlar (Ø - H) : Ø120 - 47mm								



SERKO®

PATENT PENDING	12V - 24V	EMC	E	RUSTLESS	RECYCLE	WATERPROOF	UV	IP68
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SWITCH BOX

SERKO®



NEW

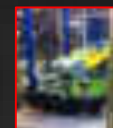
TR150 INTERIOR LAMP

SERKO®



IT COMBINE HEAD LAMP

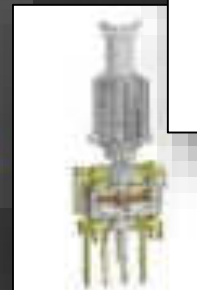
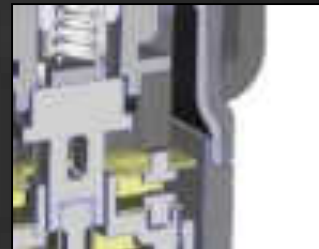
SERKO®



SWITCH SW101-D

SERKO®

NEW

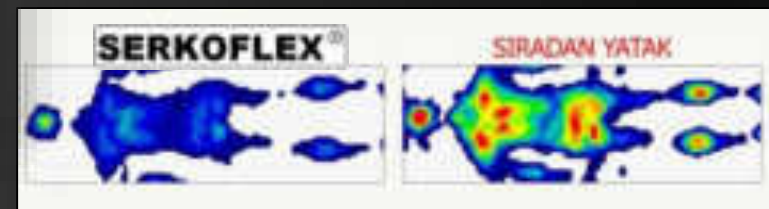
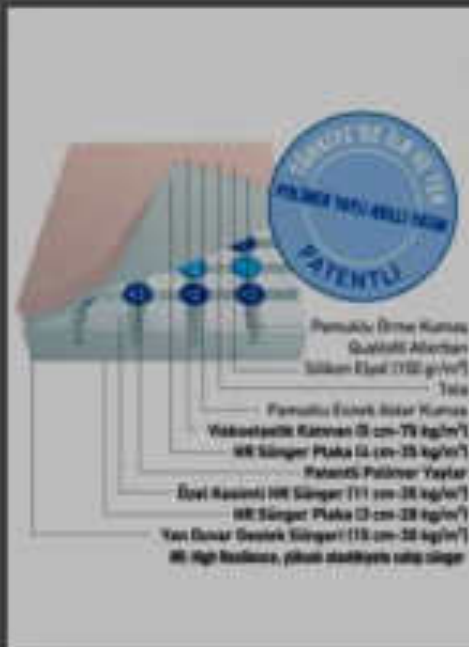


IP67



POLYMER SPRING

SERKOFLEX





POLYMER MAGNET

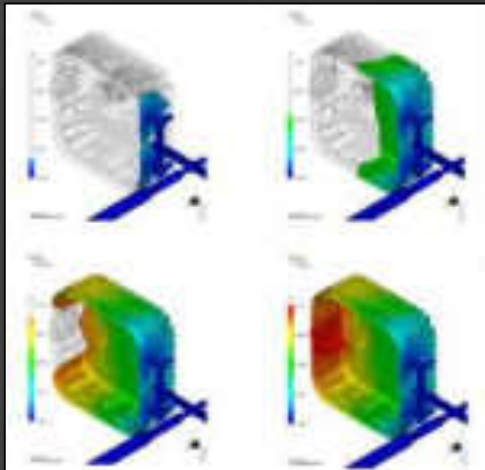
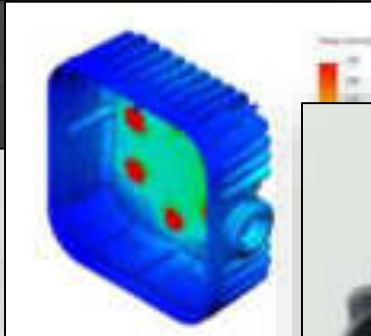
SERKO MAGNET





CONDUCTIVE POLYMER

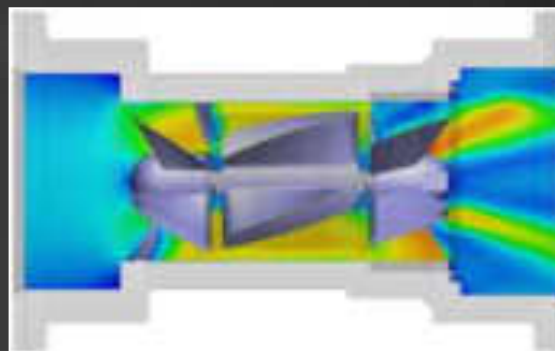
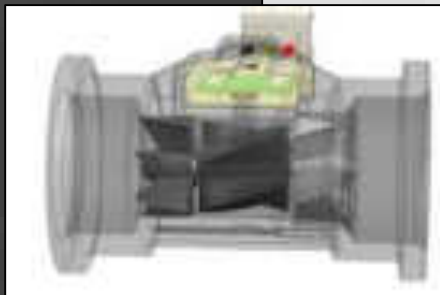
SERKO[®]





FLOWSENSOR

SERKO FLOW[®]



PRODUCTS

PRV TT-1901 PRESSURE RELIEF VALVE

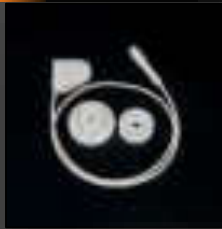
SERKOFLOW®



Patent
pending



OEM PRODUCTS





OEM PRODUCTS





OEM PRODUCTS





OEM PRODUCTS



**FLIGHT
DECK**

BOMBARDIER

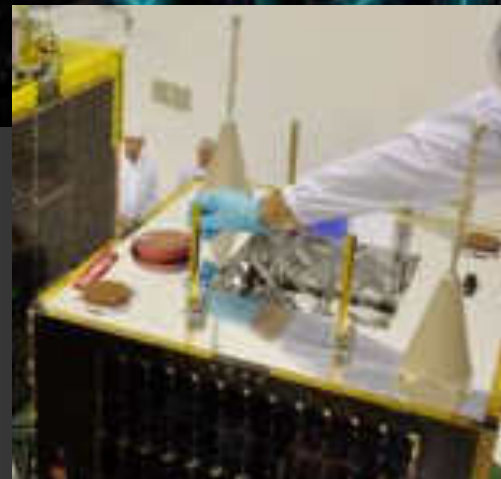


OEM PRODUCTS





OEM PRODUCTS





SERDAR PLASTİK
sanayi ve ticaret a.ş.



SPAS - INDUSTRY 4.0

Starting from 1996 till to 2005, our target is to have all of our processes like the best of Formula 1 pit stop

FERRARI F1
PIT STOP PERFECTION



SPAS - INDUSTRY 4.0

However, in 2005 we have understood that, the system in airport is the best for our processes, because all of the steps are under automatic control (poka yoke), the central computer is checking everything online



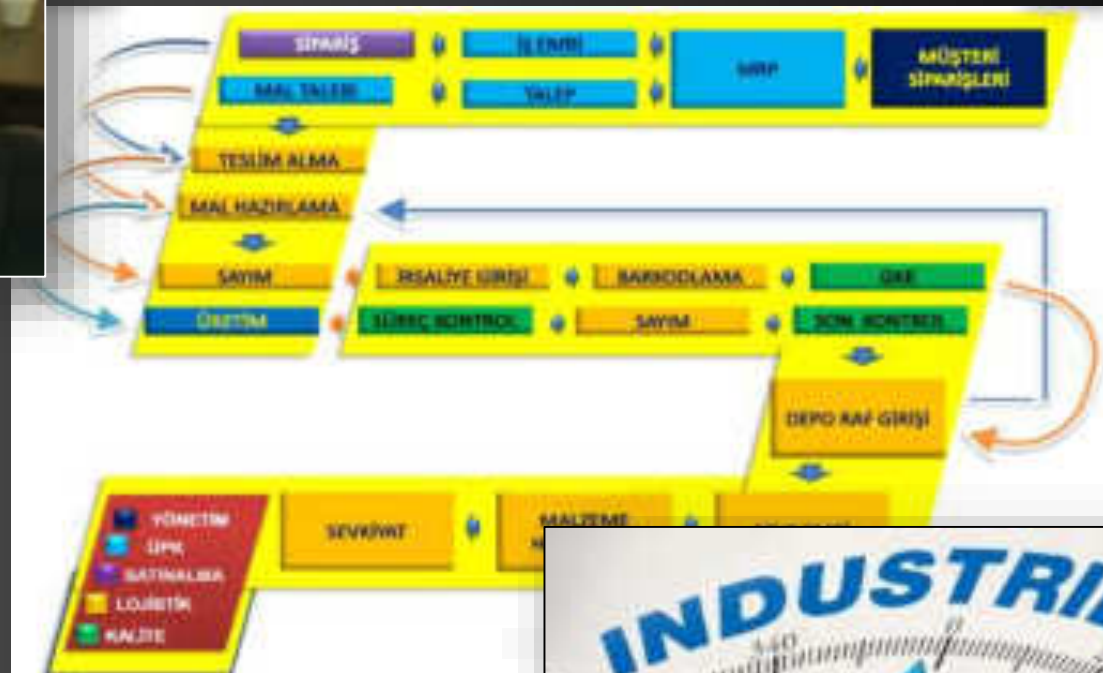


SPAS - INDUSTRY 4.0

We have designed our new system in 2005, called SPAS:
No paper, no manual input, automatic control in each step
of processes with unique database



SPAS is
designed by
Özge TÜTEK





SPAS - INDUSTRY 4.0

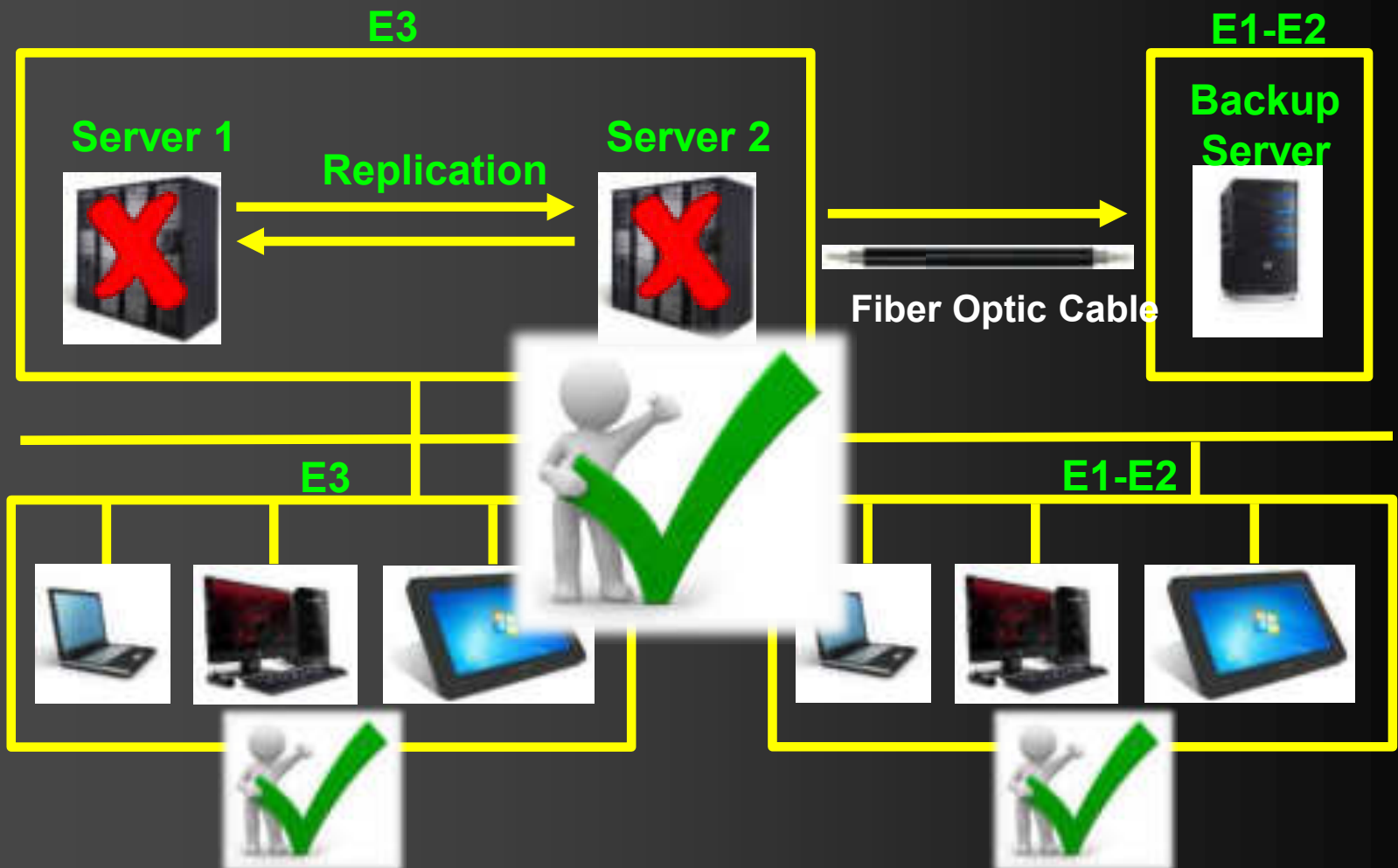
1. Changed our computer system for max data security and speed, starting from cabling





COMPUTER SYSTEM

Business Continuity

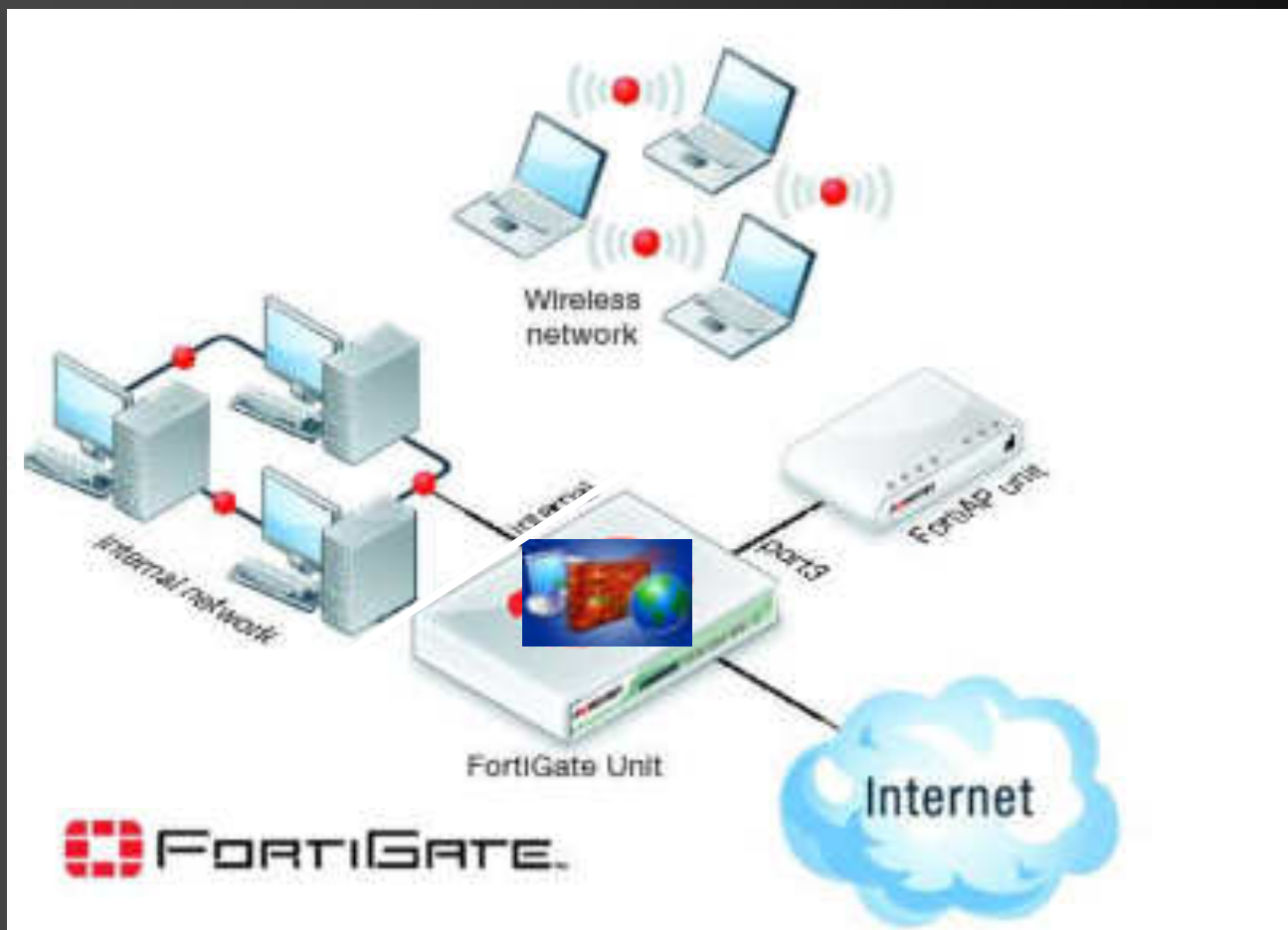




COMPUTER SYSTEM

Business Continuity

Firewall





COMPUTER SYSTEM

Business Continuity

MS Exchange Server





COMPUTER SYSTEM

Business Continuity

Central File Server



WLAN



Internet





SPAS - INDUSTRY 4.0

2. Changed our ERP system to use barcode for everything in the company





SPAS - INDUSTRY 4.0

3. Improve our production lines according to SPS Lean





SPAS - INDUSTRY 4.0

3. Improve our production lines according to SPS 5S

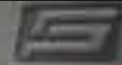
Öncesi



Yalın Çalışma



Ön Analiz



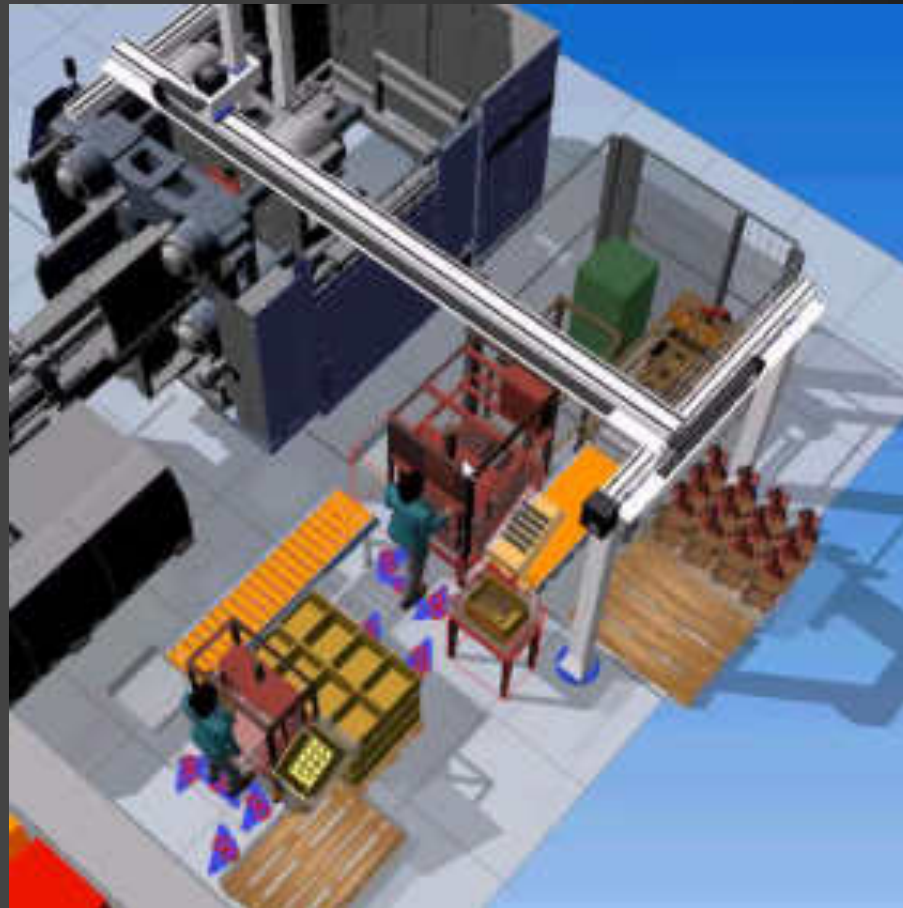
Sonuç





SPAS - INDUSTRY 4.0

4. Established the LEAN LINE System of Serdar Plastik and improve our production lines by 3D process design tool





SPAS - INDUSTRY 4.0

5. Improve our production lines with robotic and digital automation





SPAS - INDUSTRY 4.0

6. Connected all of the production and control stations to SPAS





SPAS - INDUSTRY 4.0

7. Put unique screen for each production and control stations for each operator





SPAS - INDUSTRY 4.0

8. Put ANDON SCREENS for each department of the company for team leaders online monitoring



TEKNİSYEN

MAKİNE KODU	DURUŞ SÜRESİ
E410-05	00:00:00
E420-06	00:57:37

DURUŞLAR

MAKİNE KODU	DURUŞ NEDENİ	SÜRE
E450-03	BELİRSİZ DURUŞ	00:07:19
E420-06	BELİRSİZ DURUŞ	00:00:05
E310-05	BELİRSİZ DURUŞ	00:00:05
E520-01	MAKİNE ARIZA	01:01:35

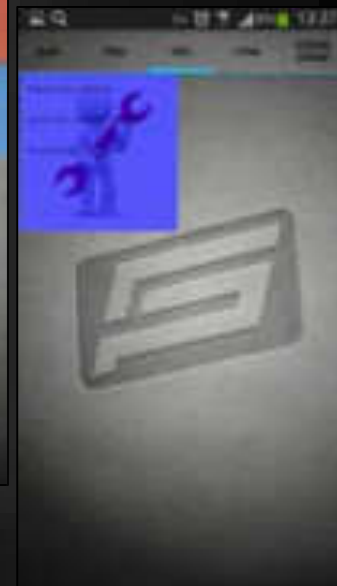
KALİTE DURUM

EN DÜŞÜK VERİMLER		EN YÜKSEK FİRELER	
E800-01	%28	E520-01	12 11881
E520-04	%49	E710-06	6 6036
E310-05	%55	E310-05	5 4946
E710-05	%56	E310-05	5 4946
E470-05	%62	E700-02	3 2613
E610-02	%79	E700-01	2 1536



SPAS - INDUSTRY 4.0

9. Generate APPLICATION for mobile phones for department leaders online monitoring





SPAS - INDUSTRY 4.0

10. Redesign all of our processes, driven by SPAS to have a poka yoke in each step





SPAS - INDUSTRY 4.0

11. Online communication between departments vertical and horizontal (production, quality, maintenance, warehouse, etc)



The screenshot shows a digital display with the SPAS logo and the word 'KALİTE' (Quality) at the top. Below this is a table with three columns: 'MAKİNE' (Machine), 'OPERATÖR' (Operator), and 'ÇAĞRI SÜRESİ' (Call Duration). The table has two rows of data.

MAKİNE	OPERATÖR	ÇAĞRI SÜRESİ
E420-04	AYTAC ÇAKIR	00:01:12

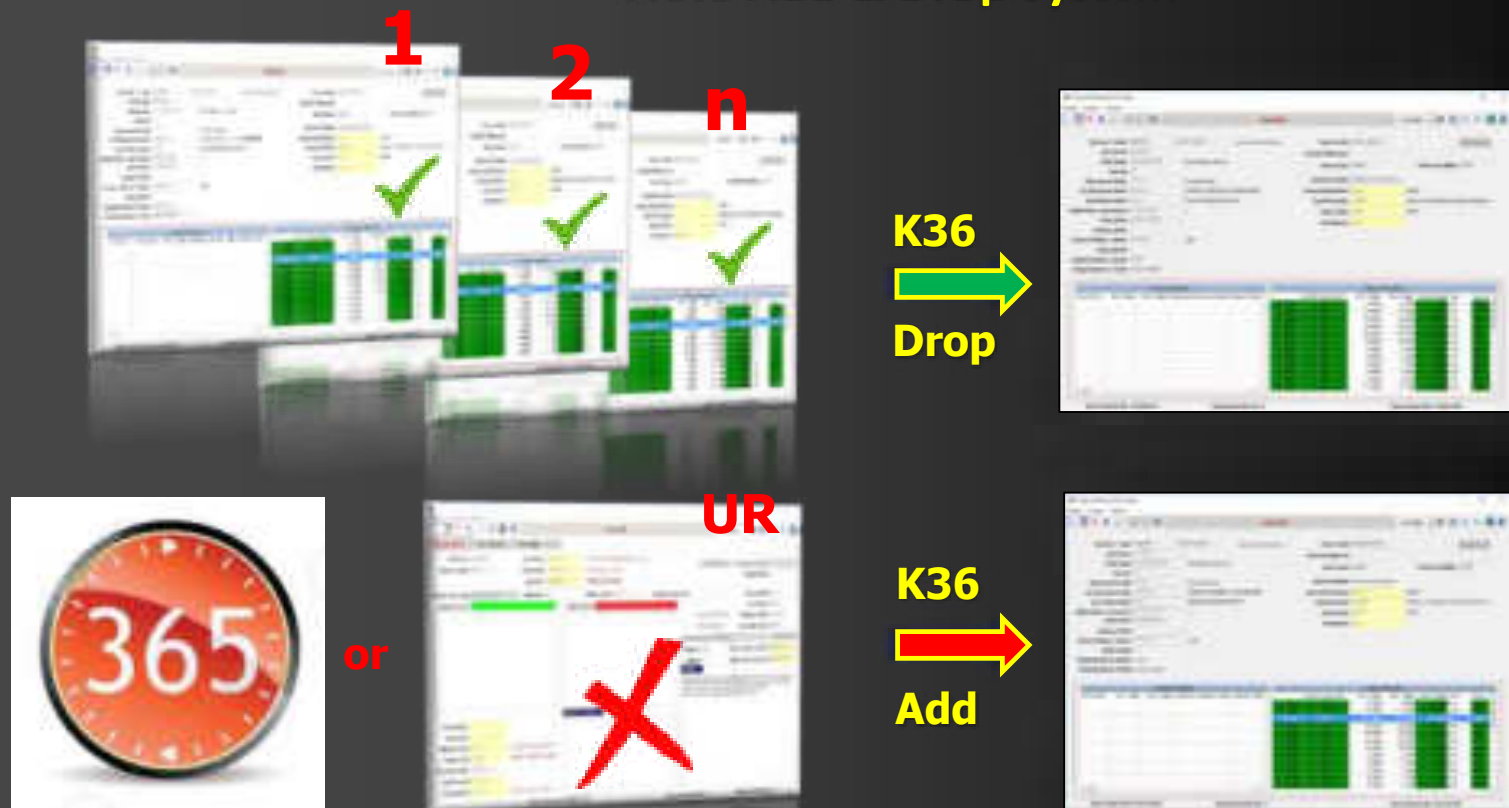




SPAS - INDUSTRY 4.0

12. Artificial intelligence implementation for quality control plans

Auto Add & Drop System





SPAS - INDUSTRY 4.0

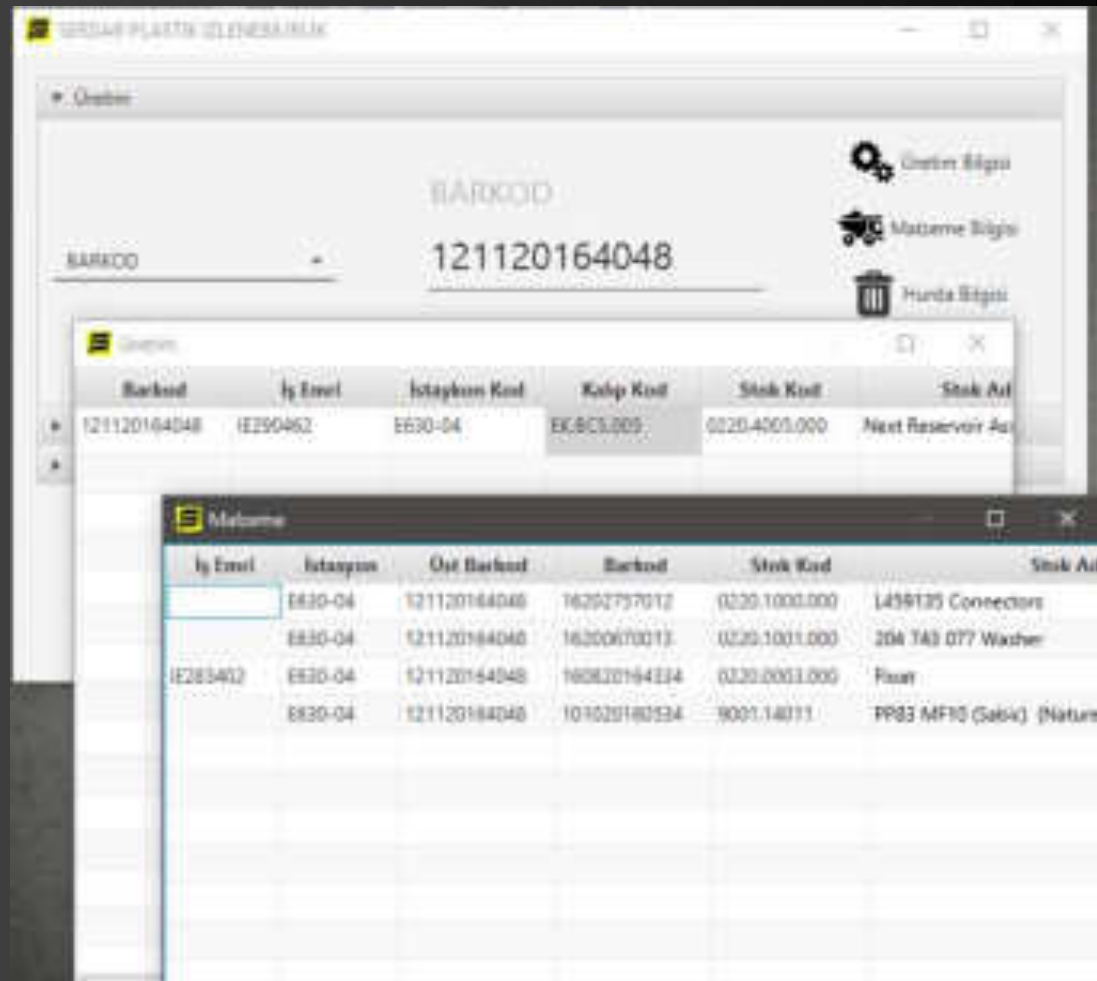
13. Augmented Reality for the service of our product, will simplify the job of the end users of SERKO products.





SPAS - INDUSTRY 4.0

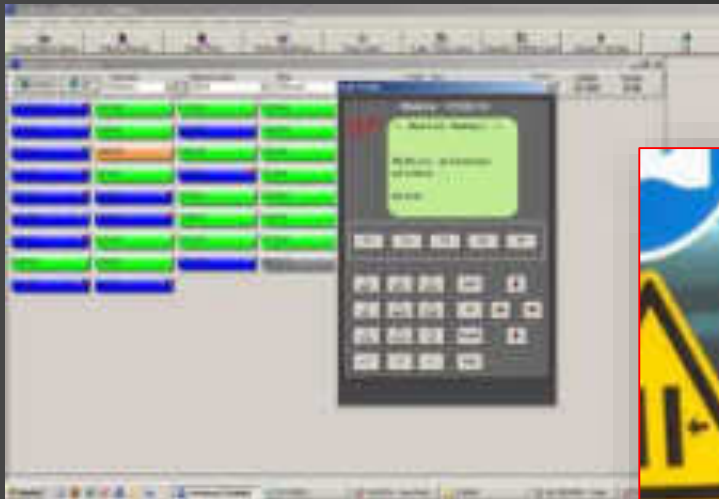
14. Full traceability





SPAS - INDUSTRY 4.0

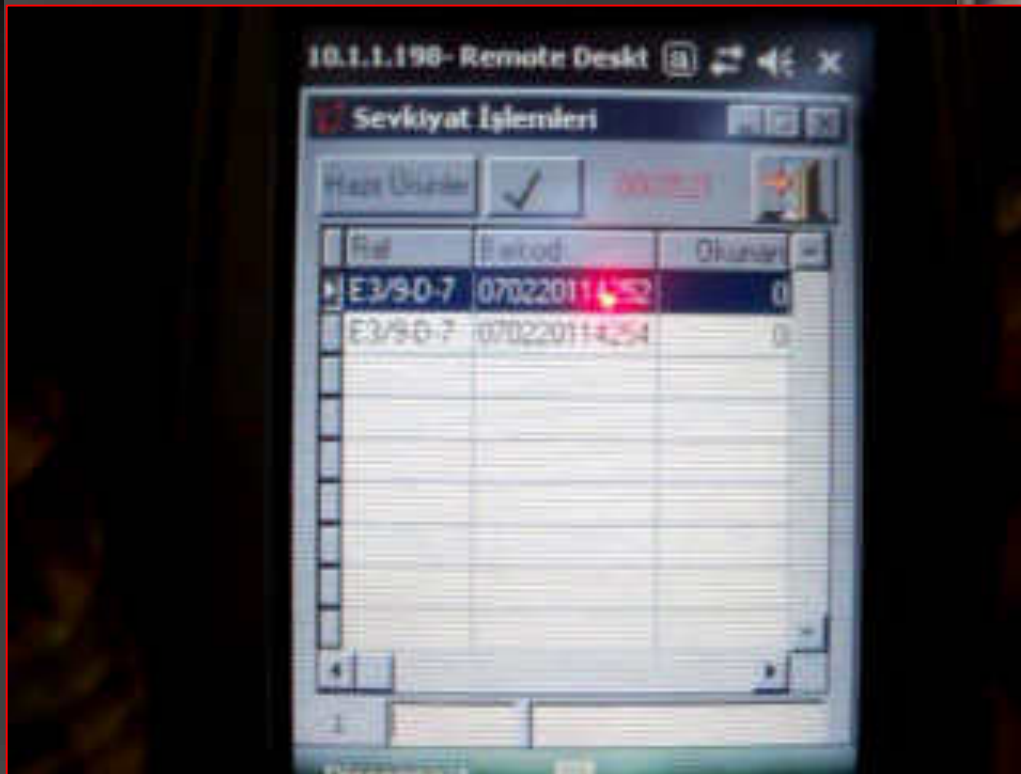
POKA YOKE for each steps
Qualification Control





SPAS - INDUSTRY 4.0

POKA YOKE for each steps
FIFO both for incoming and shipment

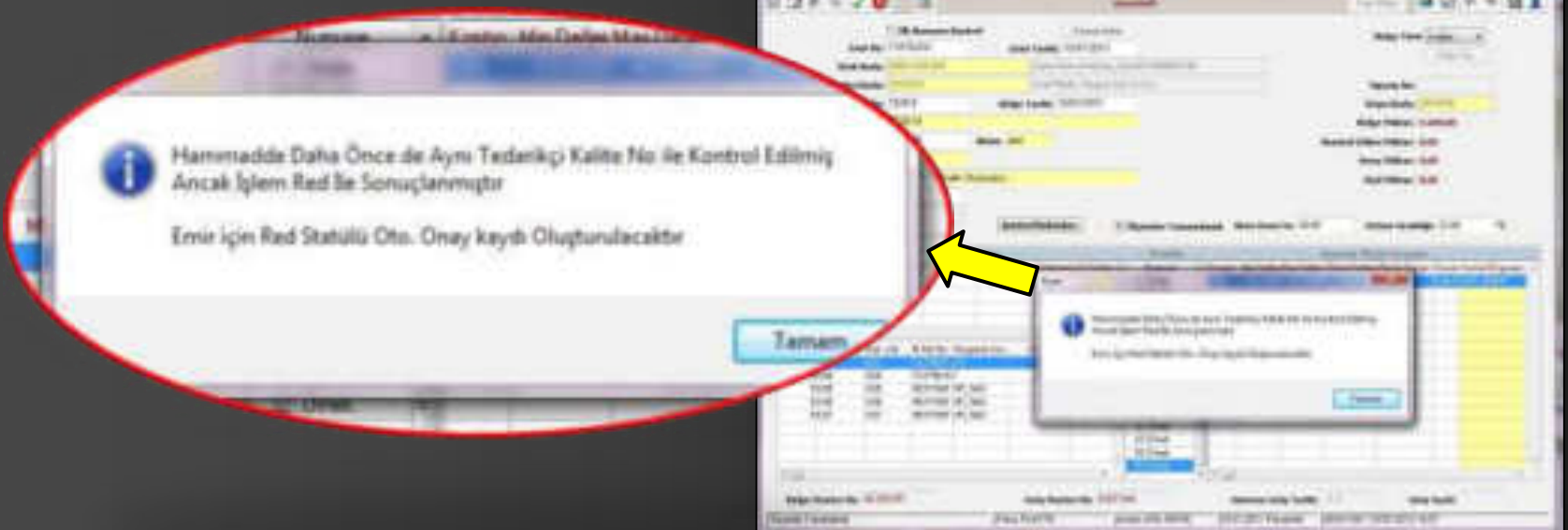




SPAS - INDUSTRY 4.0

POKA YOKE for each steps
Blocking the rejected lot forever

When a lot of income was rejected previously, this data is kept in the system and incoming quality control can not accept the same lot of income later again. The system is automatically rejecting the lot.



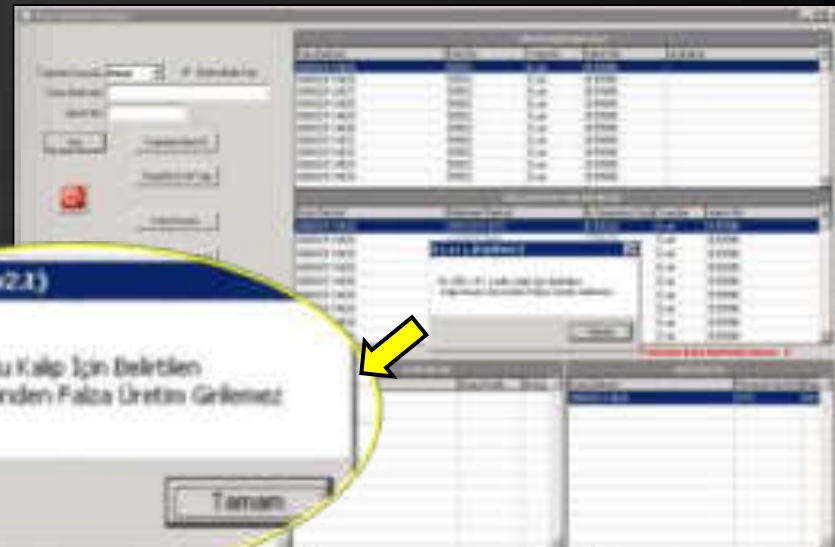


SPAS - INDUSTRY 4.0

POKA YOKE for each steps
Tool Life Control



Tool life's have been defined in SPAS and SPAS gives alarm and not allowed the planning department to add to the production plan, if the tool life is out of limit

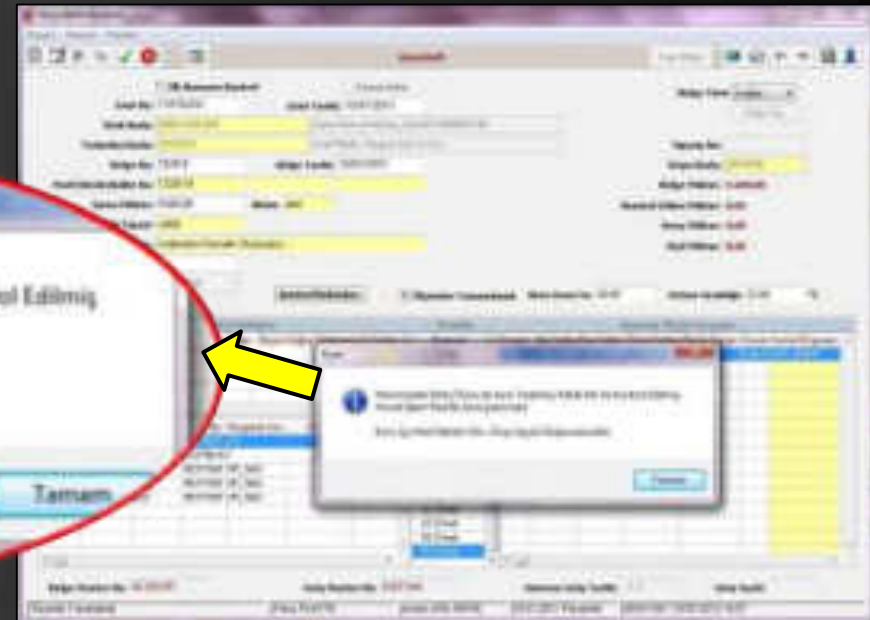
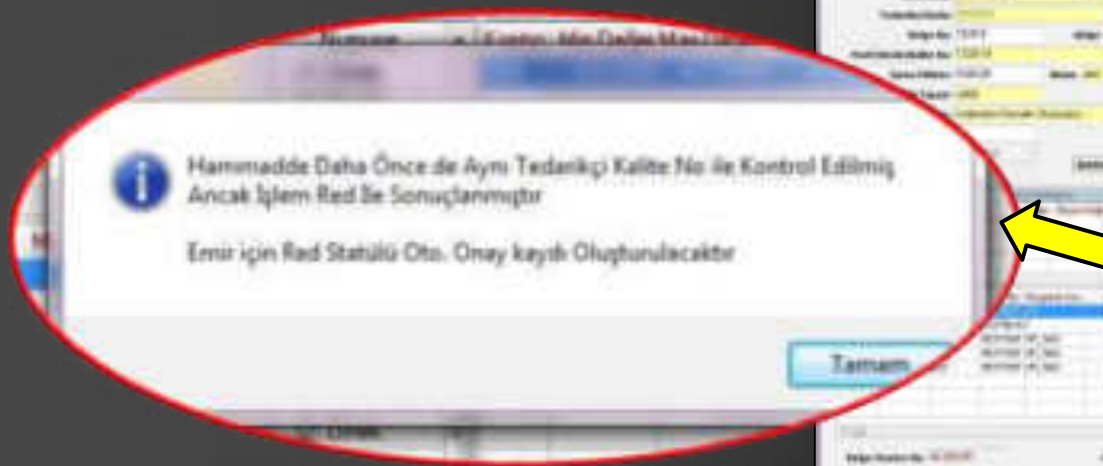




SPAS - INDUSTRY 4.0

POKA YOKE for each steps
Blocking of the stock in quarantine

By using each box in production, system is checking the situation of the box. If it is a quarantine blocked material, the system is automatically rejecting the lot.

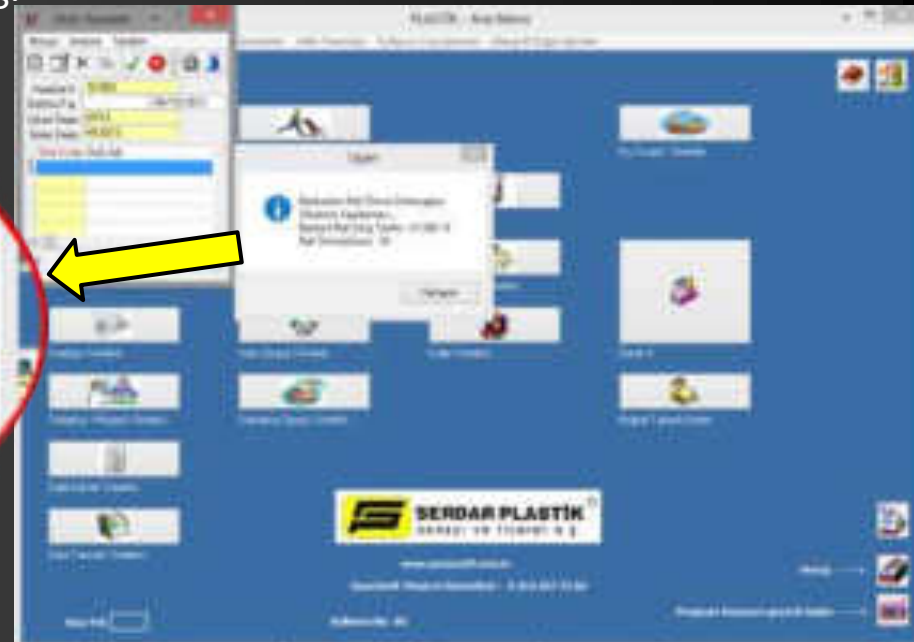




SPAS - INDUSTRY 4.0

POKA YOKE for each steps Automatic Control of Expiration Date

When a stock movement is made in the system, SPAS is checking the expiration date, if it is out of date, one can not continue, SPAS is automatically blocking.

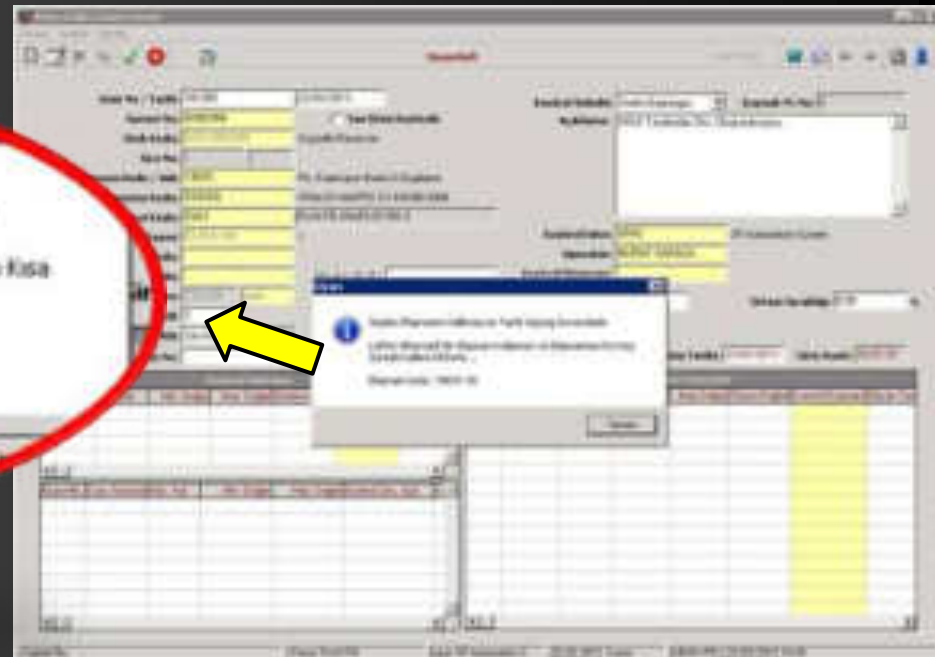
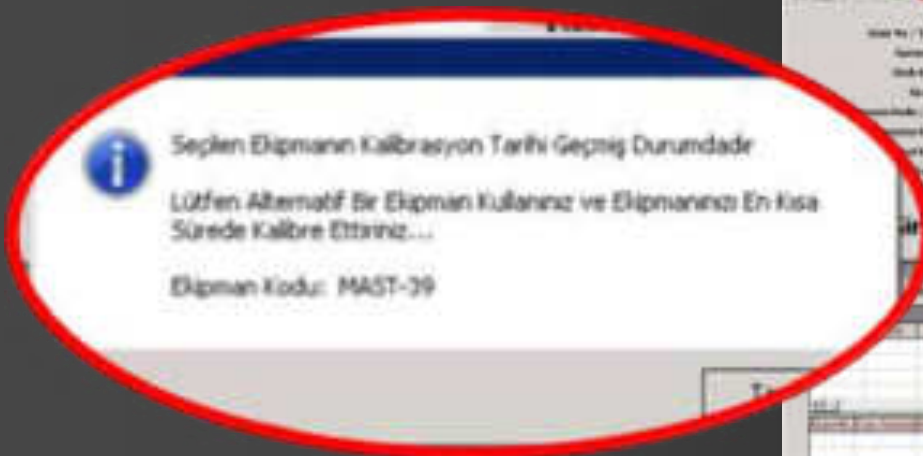




SPAS - INDUSTRY 4.0

POKA YOKE for each steps Automatic Calibration Control

When the calibration date will pass, the quality control operator can not enter any data to the system, SPAS is blocking automatically.





There are about 500 POKA YOKE in SPAS for automatic control. This is a living system, on which we are adding new add-on almost every week

