

ARYAVAZIRI

Automation engineer

Date of birth:

17/07/1989

Nationality:

Iranian

Gender:

Male



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<https://www.instagram.com/aryavaziri/>

Education AND TRAINING

B.Eng
textile engineering

Isfahan University of technology

09/2007 - 01/2014

iut.ac.ir

Professional frontend development cert.

Tehran Institute of Technology

01/2019 - 09/2019

www.mftplus.com

MOTHER TONGUE(S):
Persian

OTHER LANGUAGE(S):
English

Listening: C1

Reading: C1

Spoken production: B2

Spoken interaction: B2

Writing: B2

Languange skills

I'm an entrepreneur-minded industrial engineer and product designer who has designed, built, automated, and installed numerous industrial machines. I've worked as a project manager and product designer with many years of experience (+5 years) with various industrial mechanical machines, electrical equipment such as PLC to produce innovative products and solutions, and their customized industrial interface and software.

I'm an enthusiastic learner who never stops improving through education in academia or industry. After finishing university, I've continued learning new things, in many cases in fields even very different from my previous experiences, such as coding or welding. I'm always looking for new ways to improve my skills to design and build new industrial or digital products.

Work experience

Chief Product Designer and Board Member



Arooz industrial valve
05/2019 – CURRENT
Tehran, Iran

This start-up is established to supply a wide range of industrial products and solutions.

- * Designed, produced, and assembled pneumatic angled seat valves .
- * 3D modeling using Solidworks.

Product Owner and Chief Designer



Arya machinery
11/2019 – 05/2021
Tehran, Iran

- * Design energy-saving high-temperature fabric dyeing machines, including full automated system using pneumatic valves and PLC controller.
- * Responsible for designing UI/UX design and digital architecture of the system.
- * Scrum master responsible for a team of 4 including TIG welders and engineers.
- * Procurement Management.
- * Organize out-sourced activities such as laser cut, casting and rolling.

Maintenance and Repair Engineer



Alvan naghsh pood
01/2014 – 08/2018
Tehran, Iran

- * Automate all product line machines, containing dyeing section and finishing section.
- * Build first high-temperature fabric dyeing machine in Iran.
- * Overhauled product line, fixing and repairing broken parts, as well as building new parts..
- * Experience in sheet metal work such as 2D and 3D designing, cutting, grinding, rolling, bending, and different kinds of welding, including TIG welding process.
- * Assemble a 1988 Stork printing machine, fully repaired, revised, installed, and PLC-controlled.

PLC Programmer and Developer

Mehrsan machinery
03/2010 – 04/2021
Safadasht, Iran

- * programmed PLCs and helped to improve proficiency, including textile finishing machines such as dryer, balloon squeezer, tube fabric thermofix and compactor.
- * Overhauled factories and upgraded industrial modern systems.

EDUCATION AND TRAINING

- Microsoft Office / Microsoft Project
- AutoCAD / Python / Raspberry Pi
- PLC / HTML / CSS / Javascript / Jquery
- CNC milling / Electricity
- Autodesk AutoCAD (Optimal Knowledge)
- Solidworks (Professional Proficiency)

HOBBIES AND INTERESTS

- * Camping
- * Travelling

COMMUNICATION AND INTERPERSONAL SKILLS

Effective interpersonal skills

- * Leadership.
- * Teamwork.
- * Responsibility.
- * Flexibility.
- * Crisis management.
- * Motivation.
- * Innovation.

HONOURS AND AWARDS

2004

- * Student mathematics Olympiad

2019 – 2022

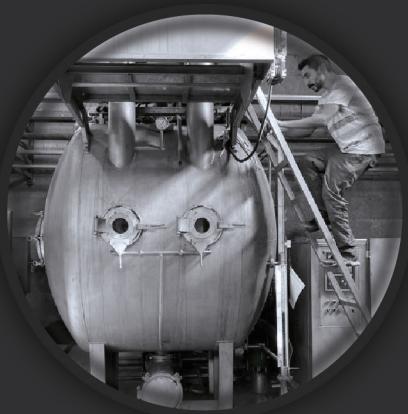
In 2019, after finishing my national compulsory military service, I decided to follow my entrepreneurial dream using years of experience that I've gained in different positions to start my startup venture producing and designing customized industrial machinery and products. Below is a summary of some of such projects in my portfolio, of which many I was also in charge of procurement and project management.

1. HT-fabric dyeing machine
2. Autoclave
3. Arooz valve production

1 HT-fabric dyeing machine

High-Temperature Fabric Dyeing Machines, from zero to customized versions, delivered and installed on factory floors, all done by my team in our workshop.

This project was started due to its high demand in the textile industry and lack of domestic products. Three tons of stainless steel have been used in each of the machines. They contain a primary pump for solution and fabric circulation and two dosing pumps to transfer chemicals from small tanks to the main tank. A reserve tank has been installed due to decreased water filling time and energy saving during the process. Whereas polyester fiber needs to reach 130 degrees to absorb the dye, these machines have to be sealed up to 3 bars of pressure to prevent water from boiling. I managed to build these machines with a 4-person team contribution. I was in charge of the product research, understanding the needs of different stakeholders and designing the product considering technical limitations, as well as project management, procurement, and overseeing the assembly process, automation, and quality control, as product owner and team leader.t



1/A

DESIGN

First, in 2014, when I had just finished university and was employed at Alvan Naghsh Pood company, I had the chance to contribute to manufacturing a high-temperature dyeing machine for the first time in Iran as a designer, electricity, and automation engineer. This gave me the technical experience to be able to design such complex industrial products. Below is a short technical overview of the design process.



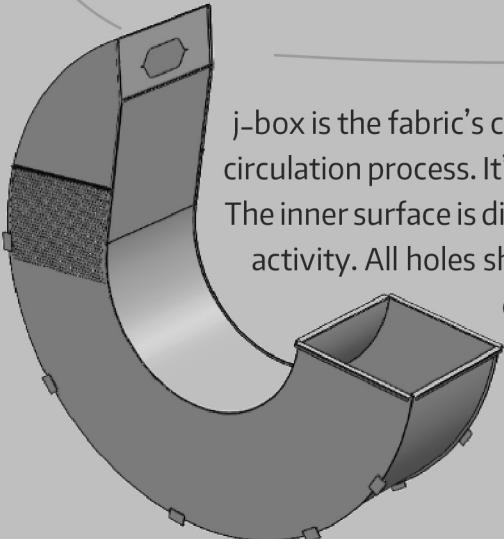
a/A
DESIGN

PARTS
Solidworks

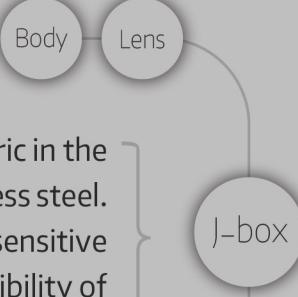
These 3 tons of mostly stainless-steel machines contain various separated complex parts, such as pneumatic valves and different pumps, which are fully automated using PLC-control systems. I designed all mechanical parts in Solid-work software. I then defined the production process of these parts using MSP to optimize the whole manufacturing process, as these parts should have been assembled in a particular order to manage time and money.

Main body

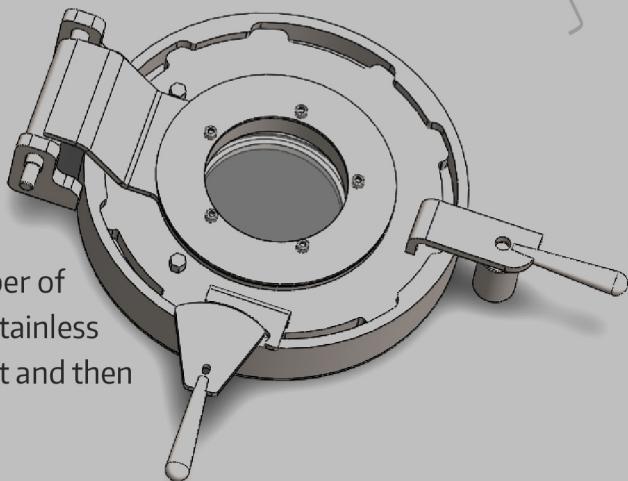
The main body, in the heaviest part. It's made out of rolled 5mm sheet with 2.2meters of diameters. Two pressed 6mm thickness lenses have been welded to both sides of the rolled body. But, before closing the caps and blocking access to the inside, we should build the J-box, polish it, and put it within the tank. After welding, We should attach the legs to the body to give our solid a sustainable structure.



j-box is the fabric's container, and due to its shape, it guides the fabric in the circulation process. It's made out of 1.5mm, laser-cut, punched stainless steel. The inner surface is directly in touch with the fabric. So, polishing is a sensitive activity. All holes should have been checked according to the possibility of damaging the fabric.



There are four legs out of 3mm stainless steel, laser-cut, bent sheet. It has to be welded to the body. The dimension of the legs has been calculated, which can bear more than 10 tones of weight.



Leg

Door

This part is an assembly of more than 20 number of other parts. The frame is out of casted, lathed, stainless steel. The door is a 15mm plate cut by a waterjet and then machinated by a manual lathe machine.

A maintenance hole is embedded on one of the lenses to make it accessible to the tank's inside for future repairing and maintenance. It's out of casted stainless steel. 6 mm pressed sheet has been welded to the cap of the maintenance hole flange. A silicone washer is used to seal the lid.

Manhole

P a/A platform DESIGN and unloader

After the dyeing process finishes, the fabric should be exported out of the machine in a carriage. Unloader plays this role, located under the platform attached to the main body. This platform also gives us the opportunity of climbing and stand on the machine for installing and repairing purposes.

R a/A Reserve DESIGN tank

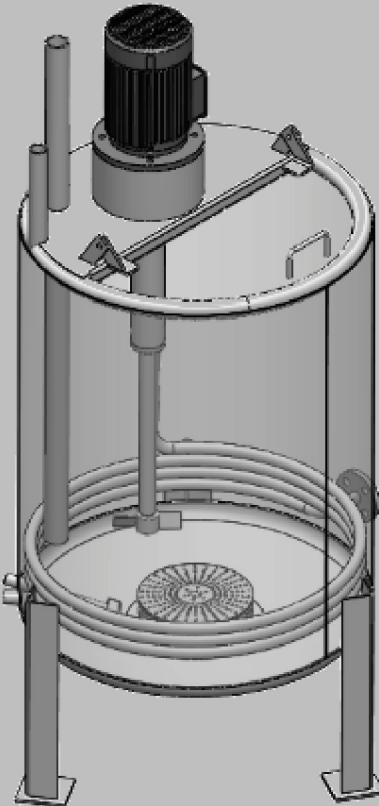
Another tank, provided to boost the water filling speed. It's made out of 3mm stainless steel rolled sheet. It contains about 1200 liters of water.

Heat exchanger

The internal heating system is embedded inside the tank to heat the water in former steps and save processing time. It can also be filled optionally by the return water from the cooling system, which is still warm. So, it helps us with time management, and it is energy saving.

C Chemical tank DESIGN

Two chemical tanks (One for chemicals and one for dyes) have been used to mix, solve and transfer dyes and chemicals to the main tank.



Mixer

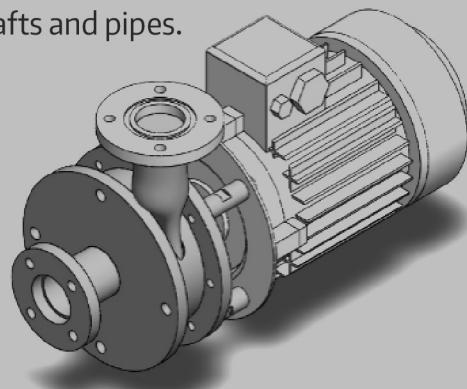
This part contains a coupled shaft with blades and a standard AC motor which solves dyes in acceptable monotony.

Heater

According to its necessity in solving dyes, the tanks provide the heater.

Dosing pump

Two dosing pumps have been provided to transfer and dose the dyes and chemicals to the main body's solution. It's made of stainless steel 12mm flanges and machinated shafts and pipes.



C Circulation DESIGN

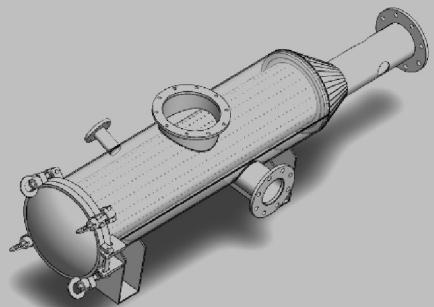
Pump The main pump circulates the solution and the fabric during the process, using special adjustable nozzles. The dyeing process is mostly happening there as the water is pumped with pressure to the fabric's fibers intensively, and also gives us the opportunity of achieving the most monotone dyed fabric possible.

Coupling Base

This pump is coupled with an 11KW AC motor attached to the machine's 4- and 5-inch pipes and a 6mm, bent stainless sheet.

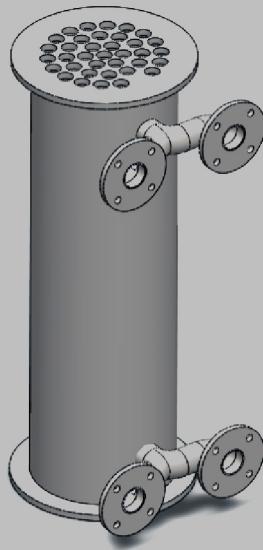
Filter

The punched 2mm rolled sheet has been used to prevent penetration of raw lint in machine holes, pipes, and pumps.

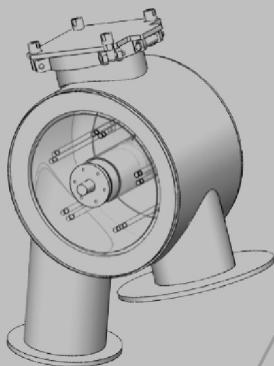


Heat exchanger

The dual-purpose heat exchanger is designed to heat and cool the circulation solution. It uses steam as a heater and water as a cooler. It is designed to heat fast and controllably.



Winch



A rotary winch has been provided to help the circulation system. The speed of the fabric is controllable while its motor runs with a variable frequency drive.

Reel

It is a dynamic part that is contacted directly with the fabric. Two heavy-duty ball-bearing with a mechanical seal helps the motor turn the reel's shaft using a belt pull system.

Door

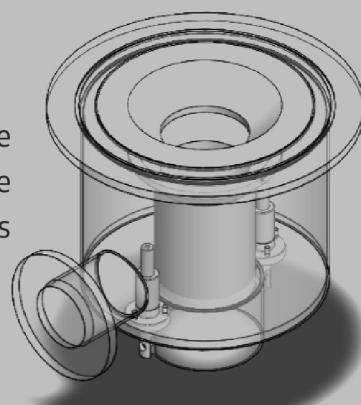
A door is built on top of the winch, giving the operator the accessibility of loading fabric, checking the nozzles, and circulation debugging.

Error system

This part is designed to ease situations where fabric wraps on the reel. Magnetic systems are used to transfer signals from inside to outside.

Nozzle

Pumped water by the circulation pump flows the fabric with the solution inside the pipe, reaching the other side of the J-Box. The volume of the flow is adjustable with a linear actuator.



Facilities

Facilities have been designed according to reduced water filling time and efficient size, considering pump size and solution volume. Pneumatic valves have been used to control the flow and temperature, and joint flanges are out of a 12mm cut stainless sheet, which is drilled and machinated with my dimensions due to pipe size.

Cable tray

a 1.5mm bent stainless sheet has been used as a tray in different locations of the machine to house the cables and pneumatic hoses, which diffused around the machine and the electrical panel.

b/A

DESIGN

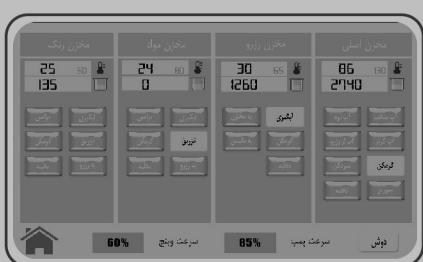
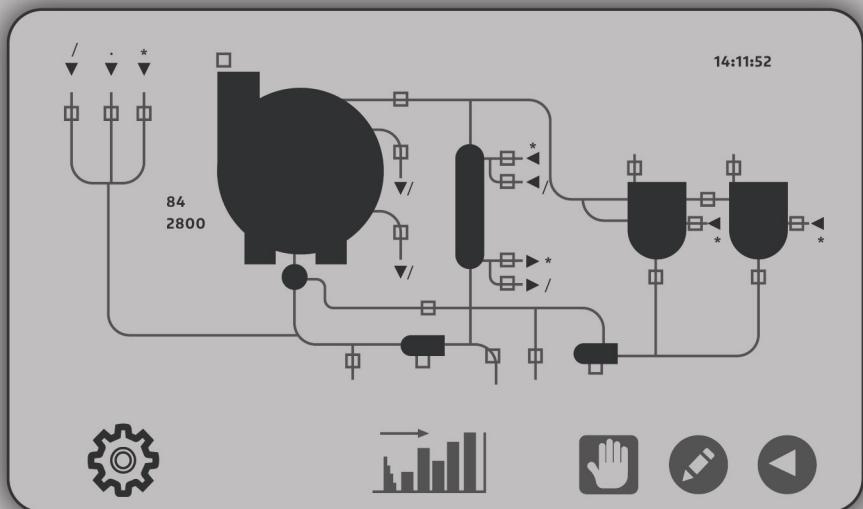
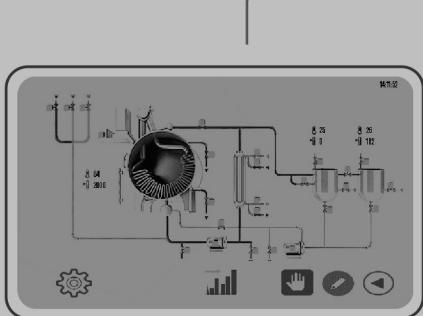
Automation design

b/A
DESIGN

UI\UX

Besides the mechanical design of these machines, these projects also need automation and integration solutions to be installed in factory floors where they will be integrated with other machinery and be used by low-skilled technicians. I aimed to use my previous experiences in industrial electricity and automation to provide efficient, fast, and environment-friendly products which a typical factory worker can use and operate easily.

10" Industrial (HMI) has been used in this project, whereas only industrial software with poor graphical options is provided for the UI. I also used my former experiences combined with an innovative attitude to provide the end-users with the best experience possible. Therefore, throughout the interface design phase, I consulted with different operators to use their experiences to improve the UX and tested multiple simulated prototypes.



مخزن رنگ	مخزن مواد	مخزن رزرو	مخزن اصلی
25 50	24 80	30 65	86 130
135	0	1260	2740
ترانس	آبگیری	آبگیری	آب سخت
گرمکن	تزریق	تزریق	آب نرم
تخليه	به رزرو	به رزرو	آب گرم
			سرمه
			گرمکن
			سرمه
			تخليه
			سرمه

Icons at the bottom: Home, Speed (60%), Weight (85%), and Weight (Dose).

Pokhlviscose

1 تخلیه

زمان: 2 با پمپ

اپگیری رزرو گرمکن رزرو ترانس آپگیری
آپگیری مخزن گرمکن رزرو ترانس کنترل دما
تزریق تخلیه رزرو انتظار درخواست مواد
گرمکن مخزن ترانس تزریق سریز
درخواست مواد ترانس تزریق تخلیه
تخلفیه تخلیه ماشین

حذف جاگذاری صفحه قبل صفحه بعد مرحله قبل مرحله بعد

صفحه 1

ماشین

مخزن رزرو مخزن مواد مخزن رنگ سرعت پمپ سرعت وینج

24 23 30 125 65% 85%

0 0 1235 2340

Kontrol Dma

گرمکن

1.2 شیب : 125 دمای تعریف شده : 130 دمای نهایی : 41:12 زمان مرحله :

اپگیری رزرو گرمکن رزرو ترانس آپگیری
آپگیری مخزن گرمکن رزرو ترانس کنترل دما
تزریق تخلیه رزرو انتظار درخواست مواد
گرمکن سریز
درخواست مواد ترانس تزریق تخلیه
تخلفیه تخلیه ماشین

صفحه 1

X0~X7

PLC

X0~X7	CARD 1	CARD 2	CARD 3	CARD 4	CARD 5
Y0~Y5	X20~Y27	X30~X37	X40~X47	X50~X57	X60~X67

کارت دما

ورودی خروجی آنالوگ

اتوماتیک
پمپ
وینچ ۱ جلو
وینچ ۱ عقب
وینچ ۲ جلو
وینچ ۲ عقب
درخواست مواد
آلازم اسنپ

ورودی خروجی آنالوگ

خرجی

کارت دما

PLC programming

This part defines the structure of the project's electricity, processing the signals from sensors, activating the outputs, and monitoring the machine. The PLC is the central controller which processes digital and analog signals such as sensors, keys, microswitches, valves, and motors. The data between PLC and HMI is transmitted using the RS485 protocol, which is typical.

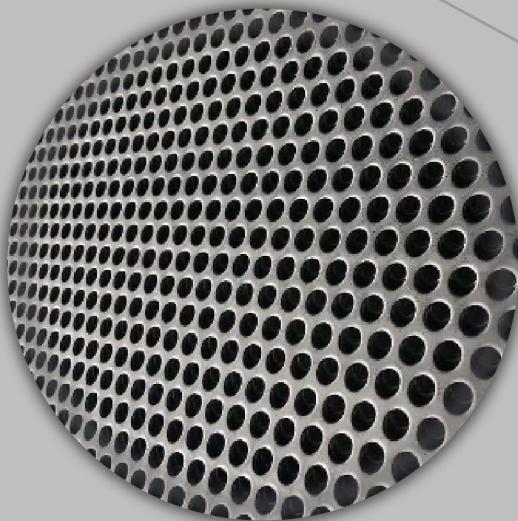
1/B

Manufacturing

Several out-sourcing activities have been used during the production of the machine. These activities have been managed and ordered by me due to manufacturing procedures.

Out-source

Laser Cut



Punch

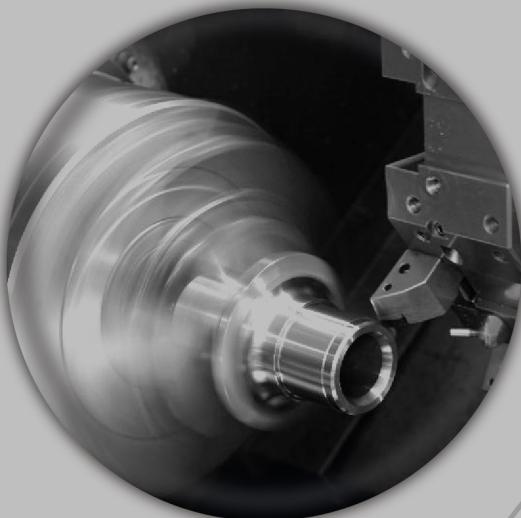
Bending
and rolling



Casting



Lathing



Sand
blasting



Assembly and Welding

b/B
Manufacturing

Assembling separated parts is a prerequisite for welding and attaching components to the main body. For example, it is impossible to weld the winch's joint flange to the main body unless the parts are assembled. Therefore, this process needs careful planning and task management to optimize the delivery time.

Main Tank

Attaching the main body and lenses together is definitely the most difficult challenge of the manufacturing process. Welding legs to the main body at a balanced level is another challenge, which needs careful and precise implementation.



RT&CT
& DT

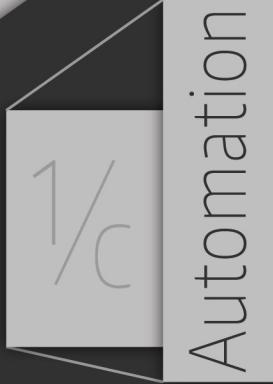
RT: Reserve Tank / CT: Chemical Tank / DT: Dye Tank

3mm rolled sheet metal has been welded to the pressed rounded cap for the tanks' bottom. A rolled pipe is used to heat the water located in the lower level of the tanks and also for water filling at the very top level of the tanks.

Different pipe sizes are used for dosing, water filling, temperature control, and transferring from the machine to the tanks and vice versa. Thirty valves control the flow and temperature, commanded by PLC.

Piping





Electricity

Industrial equipment has been used to control the process and reduce human involvement and, therefore, human error.



Electricity panel

The platform's frame is made out of a 1.5 mm stainless sheet, housing electric equipment and PLC. One section of the panel is dedicated to the pneumatic valve control. After consultation with different users, this panel is designed for efficient cable, hose, and space usage, better user access, and ease of future maintenance.

Equipment

Terminals, thermal keys, VFD, etc., have been used to run different motors, protect them and change their speed. Wire and terminals in various sizes have been chosen based on their functionality.

Sensors

The temperature of the tanks has been detected through PT100 sensors which are also being processed in PLC.



Hydrostatic sensor

This sensor measures the volume of chemical solutions in reserve and small tanks. It sends a 4–20ma signal to the PLC depending on how much solution is inside the tank.



Magnetic level sensor

This sensor measures the level of water in the main tank. A magnetic ball inside the pipe floats on the tank's water surface. The sensor reads the height of the magnetic floater ball, which can be calibrated in the PLC to find the accurate water level inside.



Beam detector sensor

This sensor detects errors in fabric circulation, which allows the operator to unload the fabric faster.



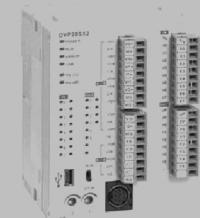
VFD

Variable frequency drives change the circulation pump's speed to control the outflow and change the reel speed to adjust the fabric's circulation pace.



PLC

As we discussed, here we have our machine's brain, which controls the whole process with editable programs through the UI.



Pneumatic valves, jacks, and actuators

PLC controls pneumatic valves, jacks, and actuators by electric control valves with 24VDC actuators, which can communicate with PLC easily. Valves are stainless steel material with Whiton

seals in different sizes from DN15 to DN-100. Butterfly valves equipped with a pneumatic actuator and PTFE seal are provided for draining valves. More than 100 meters of pneumatic hose are used in each machine.



Cabling

Cabling is one of the critical implementation challenges of these machines, which connects all electrical and mechanical equipment and sensors, collects signals and information, and sends them to the control panel through cable trays.

The successful conclusion of these projects could have only been achieved by the unceasing attempt, hard work, in-depth research, diverse experience, and consultation of all my colleagues and friends for their participation. I'm very grateful. I was a proud member and in charge of the technical team. Below I give a very brief introduction of the technical team. Other teams in our venture were in charge of more general aspects, such as finances and marketing.

1/D

Team mates

Ibrahim Coban

Professional Tig welder with more than ten years of experience in manufacturing and mechanical assembly. With his connections in Istanbul, some machine parts have been imported from Turkey, such as oversized valves.

Behrooz Kanani

Chemical engineer who helped us with fluid and pump calculations, pipe sizing, and fabric dyeing techniques.

Ali Nasrabadi

Professional Tig welder with experience in welding stainless steel and Aluminum alloys. With his background in manufacturing in the pharmacology industry, he helped us design with different points of view.



Wood Treatment Autoclave

Termites are one of the most significant destructive enemies of wood, which cause a lot of damage and reduce the material's lifetime. One of the solutions for this problem is the chemical treatment of the raw timber under high pressure until the chemical solution reaches the natural depth. After this 6 to 12-hour process, our product is resistant to Bugs, termites, and optionally sunlight UV (If you add the respective chemical). The process is a step-based procedure with different steps such as vacuuming and pumping, using wood treatment autoclaves. I've designed, manufactured (mainly throughout-sourcing), and installed a wood treatment autoclave machine for this purpose all by myself and a team of workers I've led.



2/A

DESIGN

a/A
DESIGN

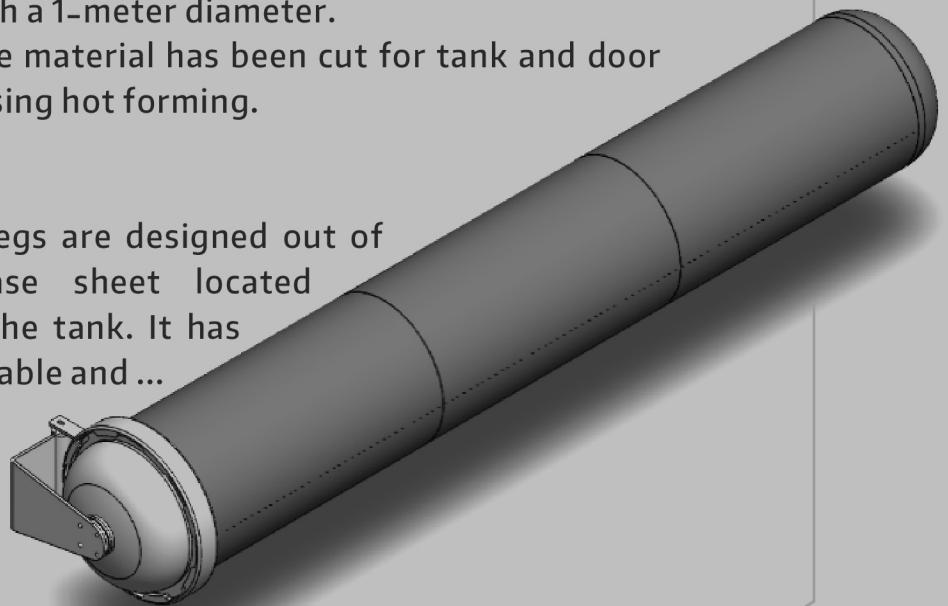
PARTS
Solidworks

Parts of the autoclave are laser cut out of a 2*12-meter 20mm A516 Sheet metal.

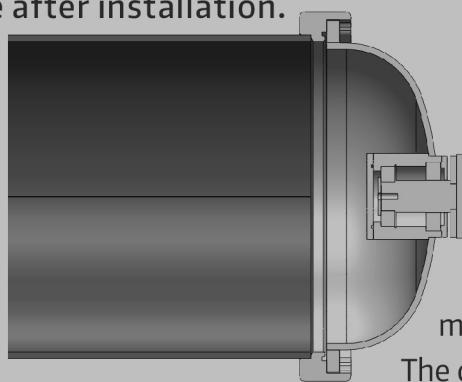
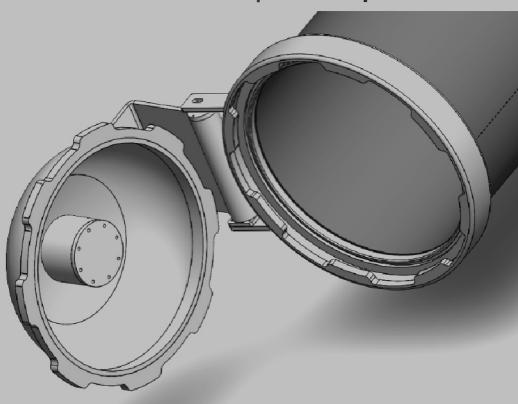
The main body is made out of 20mm A516 rolled Steel with a 1-meter diameter.

The same material has been cut for tank and door lenses using hot forming.

Three legs are designed out of the base sheet located under the tank. It has to be stable and ...



...keep in balance after installation.



Main Body Lens Leg

The door is a vital part of the machine, consisting of 2 main parts:

The door itself and its frame. They are both made out of rolled 150mm bars of iron, designed to be sealed in 15 bars of pressure with a silicone washer between. The frame is welded to the leading role, and the door is connected to the body through parts such as ball-bearing, which gives us a long-lasting ability to open and close the door with a pneumatic linear actuator jack.

A vacuum pump, a circulation pump, and a drain pump have been embedded in the design of the project's installations, based on the working pressure and volume of the tank. Accurate calculations were done by myself based on fluid mechanic formulas. A 6000-liter poly-ethylene tank is considered to store the return solution after timber absorption.

Installations and Facilities

Door

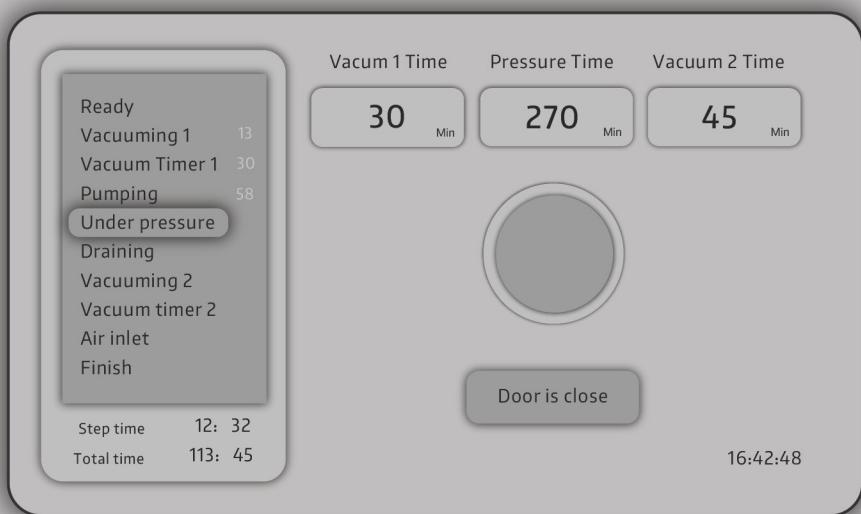
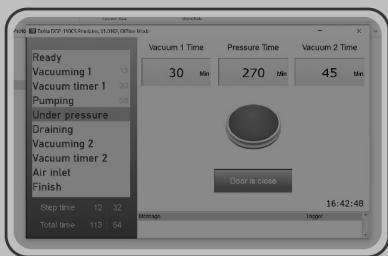


Automation design

I also designed an automation solution to control, automate and monitor the process using pressure switches, pneumatic valves, sensors, and a PLC controller.

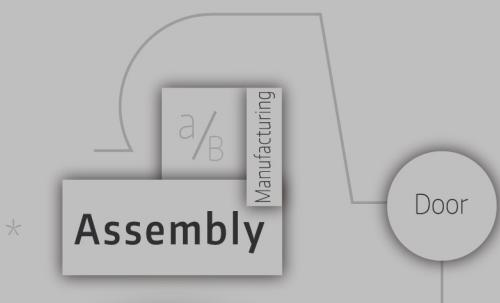
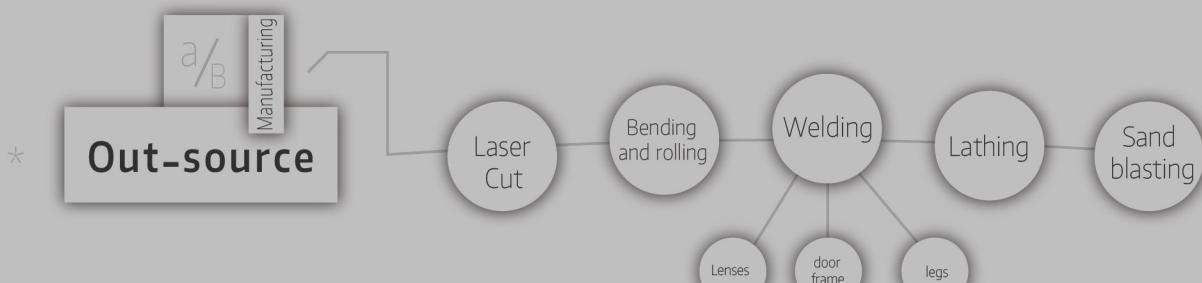


PLC programming



Most of the activities of this project has been out-sources. I, as a project manager, controlled the manufacturing quality ,managed the processes order and released the blueprints for laser-cut and other procedures.





The complex comprises 25 elements, including four ball bearings, two shafts, six connection flanges, and a collector.



Piping and welding flanges and connecting tanks have been done to control the process using pneumatic valves, mechanical check valves, pumps and a vacuum pump, and three safety valves.

Piping

Electricity Panel

A compact IP65 electricity panel with an operation panel is provided to cover the life-decreasing effects of the super dusty working atmosphere.

Panel

Various equipment such as contactors, thermal keys, phase control, flow switch, an inductive sensor is used for automation reasons.



Manufacturing
2/C

Electricity

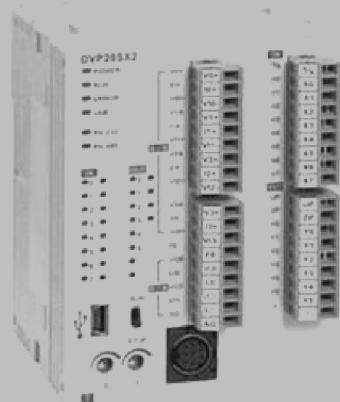
Pressure switch

Four pressure switches have been provided to control the system's pressure.



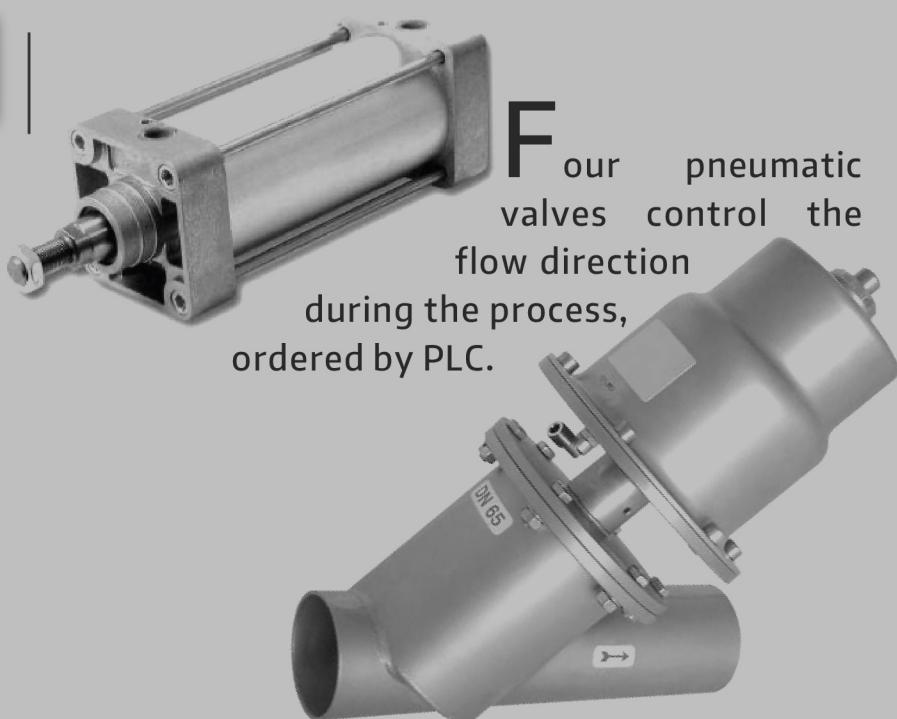
PLC

Delta PLC has been used to communicate with the HMI interface and process signals from sensors and switches to command the outputs.



b/c
Manufacturing
* Pneumatic

Four pneumatic valves control the flow direction during the process, ordered by PLC.



3

Arooz valve production

A pneumatic valve is a device used to control fluid flow in any system. Angled-seat is a pneumatically controlled valve with a piston actuator providing a linear actuator to lift a seal off its seat. The seat is set at an angle to give the maximum possible flow when unseated. Due to the lack of production of this specific type of pneumatic valve in our country, my friend and I co-founded a start-up workshop to design and produce high-quality and long-lasting pneumatic valves despite many uses in different industries.

We modeled our body structure and made aluminum molds to produce the valves. Each valve contains four different casted parts and a cylinder formed by hydraulic pressing. Casting and CNC-machining processes are being outsourced. Each valve has about 30 pieces, and it's being assembled in our workshop. At the moment, we produce six different sizes from DN15 to DN80 pneumatic valves which are in high demand.



DESIGN

3/A

DESIGN

* Cylinder

b/A
DESIGN

* Connector and Nut

c/A
DESIGN

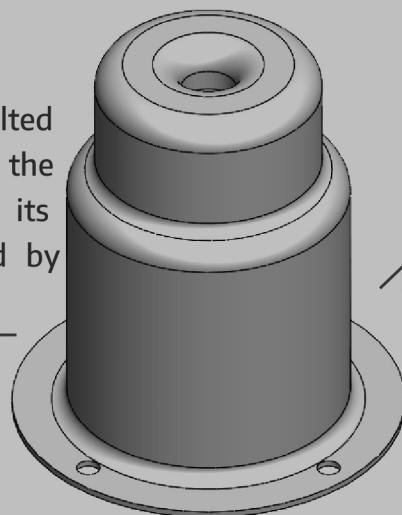
* Y-Body

c/A
DESIGN

* Assembly

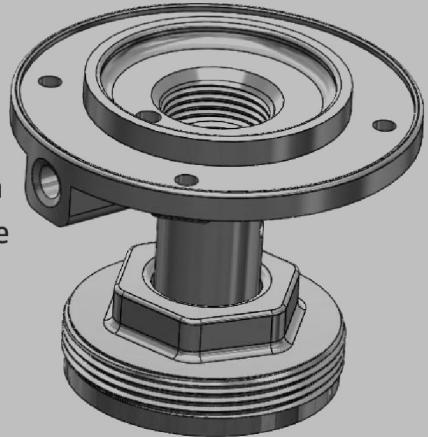
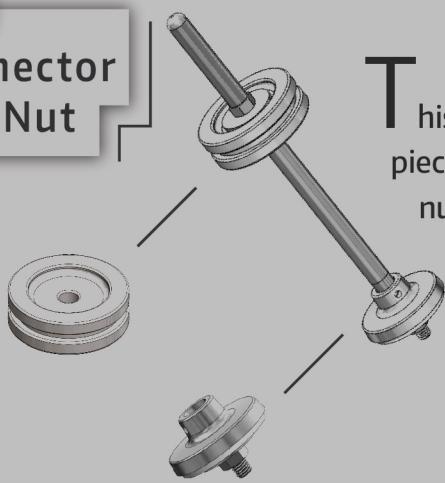
This product has been designed by Solidworks software. The individual parts have been modeled, and aluminum mold has been made for casting primitive steps. The cylinder is out of a 1.5mm pressed stainless sheet. Other parts are designed to be machined by CNC-lathing machines.

This cylinder, which is bolted to the connector, eases the piston's movement with its smooth surface, actuated by compressed air. The spring

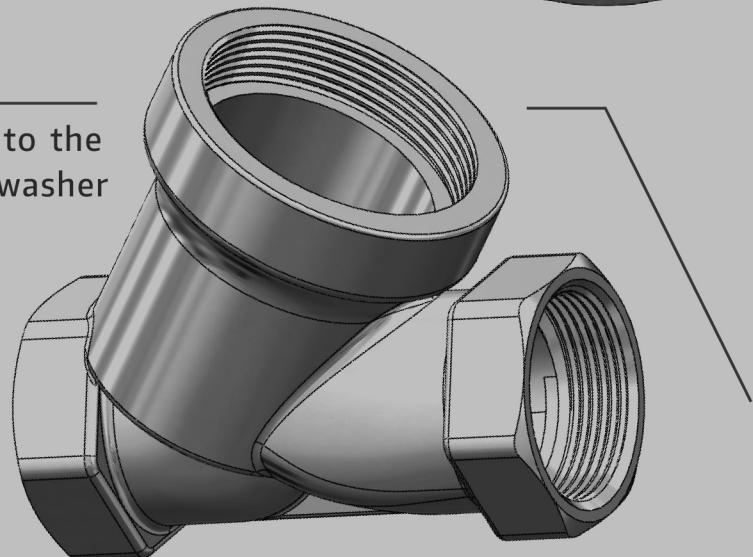


moves the piston in the opposite direction to close the valve when it's not necessary.

This part contains numerous small pieces such as PTFE V-Washers, Brass nut with O-rings, threaded stainless nut out of casted material, and a dynamic piston made out of the stainless shaft.



This part is connected to the connector, using a PTFE washer for sealing purposes.



3/B
Production



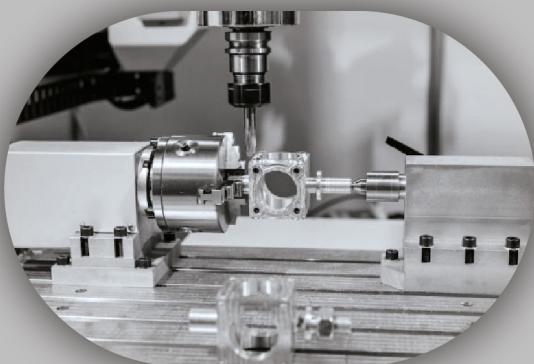
a/B
Production
* Molding



b/B
Production
* Investment Casting



c/B
Production
* Pressing

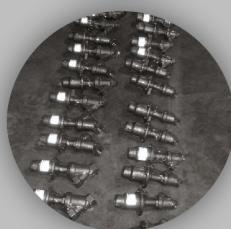
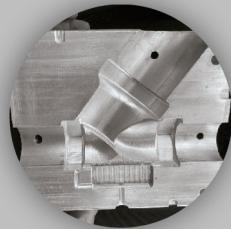
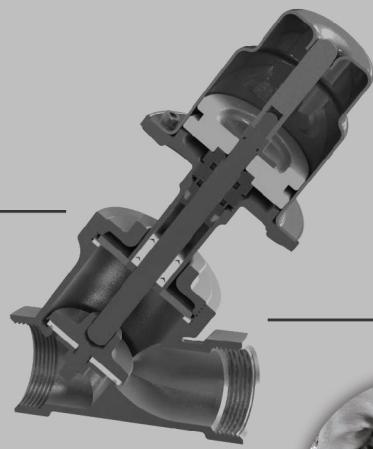
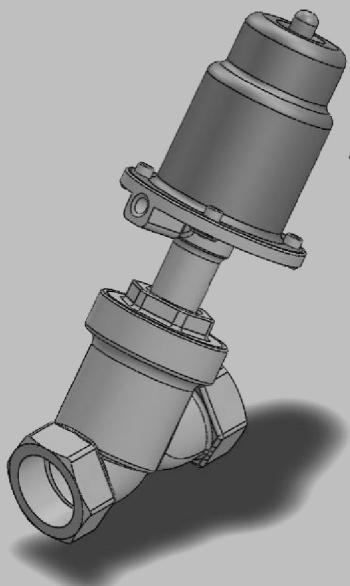


c/B
Production
* CNC-lathing

C/B

Production

* Assembly



Team mates

1/D

Business manager and financier, and CEO of the company. Also responsible for managing the workers and negotiating with suppliers and clients.

Behrooz Kanani

*

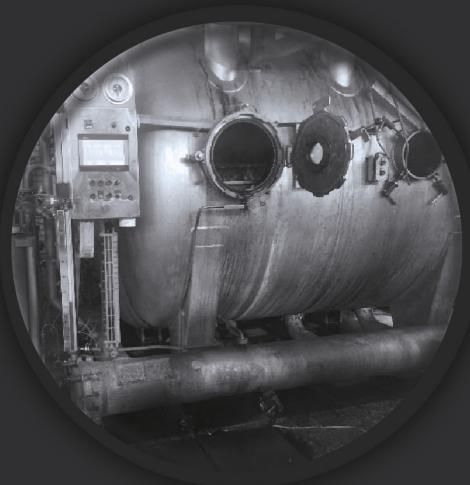
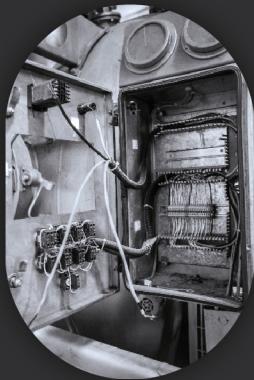
2008 - 2018

Textile machineries automation

1. Alvan Naghsh pood
2. Mehrsan machineries

1 Alvan Naghsh pood

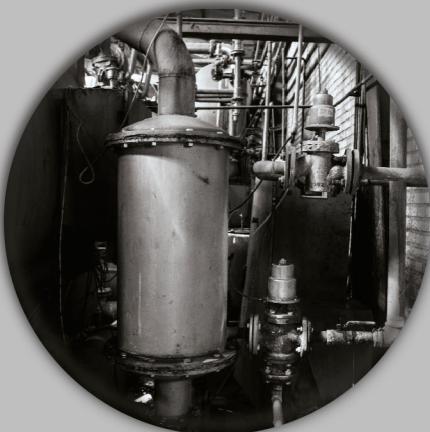
I've started my career in Alvan Naghsh Pood company as a student intern and then was employed full-time and promoted to maintenance and repairment manager. This was where I'd learned more than anywhere else because of the technical support and their need for innovative solutions for development in a company's growth phase.



A1 Alvan
Naghsh
pood

High-temperature dyeing machine

This was my first manufacturing experience when the company decided to build a dyeing machine for domestic use. This project was done in 2014, just after I graduated, and was promoted from trainee to maintenance and repairing manager. I was responsible for the automation of the machine, using PLC and pneumatic systems, where the company decided to build a high-temperature dyeing machine using other working machines and their plans. This gave me the experience which led to the design and manufacturing of my own high-temperature dyeing machines years later.



BAlvan
Naghsh
pood

Printing machine

My other project was overhauling a 1985 Stork fabric printing machine, which has been out of date for a few years. I managed to install, repair, and build broken parts, upgrade and automate this machine.

**C**Alvan
Naghsh
pood

Stenter

Stenter is a virtual machine in the textile finishing process. I overhauled two old stenter from the '90s, including complete electricity revision and replacing old DC motors with AC ones with better performance.

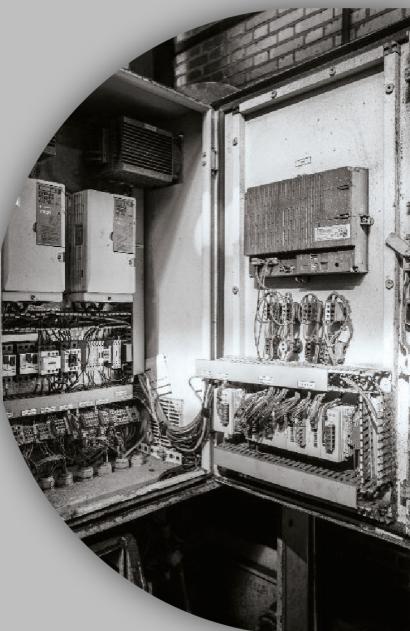


D1 Alvan
Naghsh
pood

Jigger

D

Designing an automation solution on this machine challenged me because of its tension sensitivity. I learned about encoder and servo and tension control systems there.

**E**1 Alvan
Naghsh
pood

Dryer

A

A model-2000 Turkish brand fabric relaxes drying machine has been overhauled and automated by me, which is also equipped with variable frequency drives for power-saving reasons.

F1 Alvan
Naghsh
pood

Steam boiler,
Hot oil boiler,
Air compressor,
RO water treatment

I designed installations and gave solutions for the company's energy and water-saving plans. Also created a RO water treatment and built the electricity panel for it.

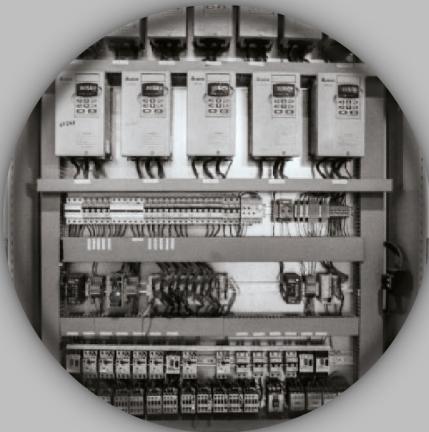
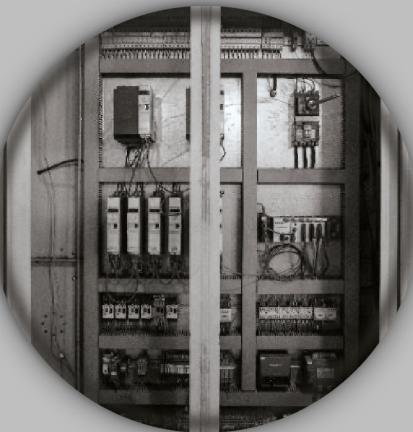
G

1

Alvan
Naghsh
pood

Chain and Compactor

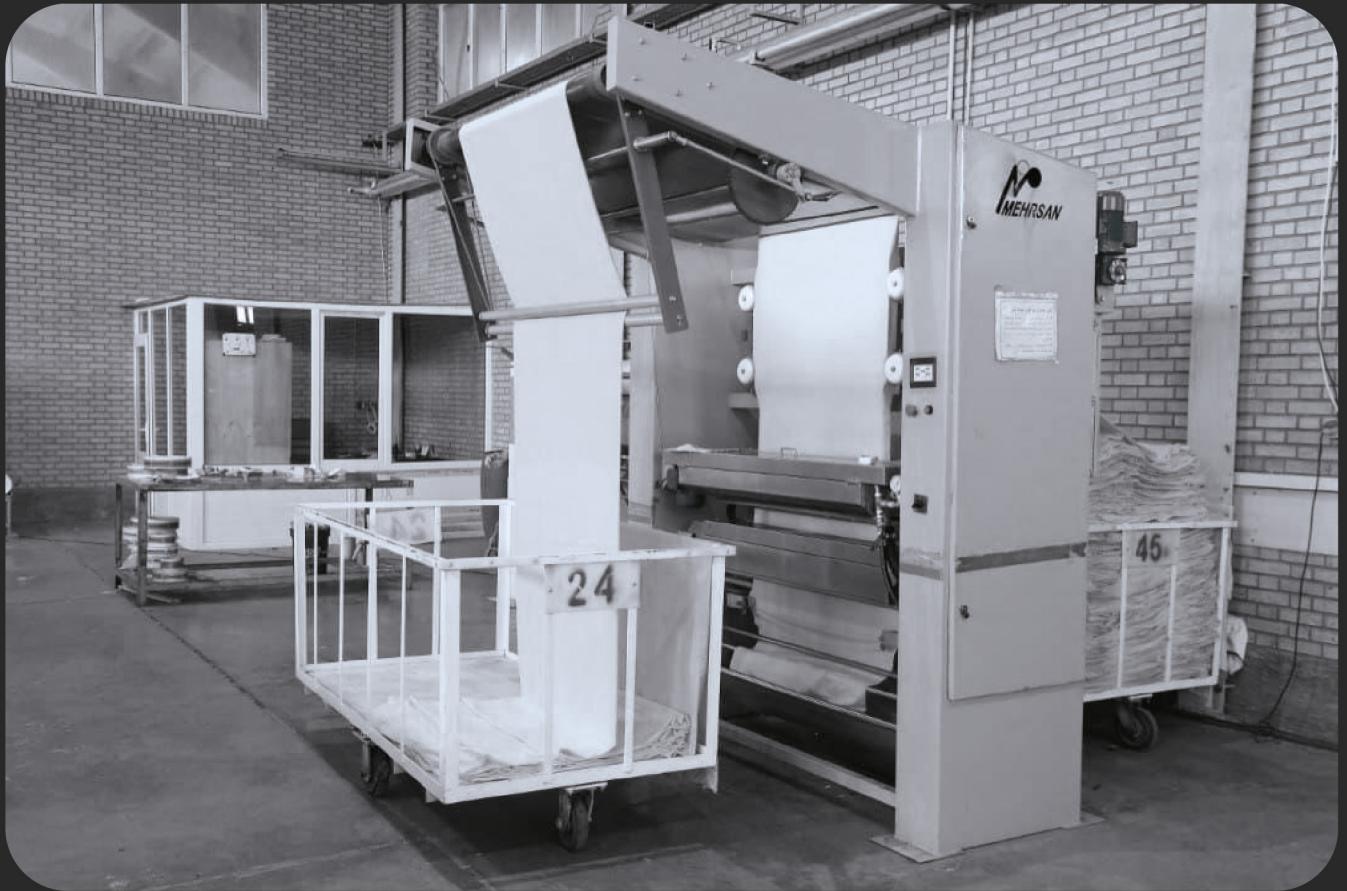
This set includes two individual machines from different companies: the compactor machine from HAS-group machinery 2014 and the Chain stretcher machine from AGG machinery 2005. To implement a continuous finishing process, I overhauled and integrated the stretcher machine with my own designed electrical structure.





Mehrsan machineries

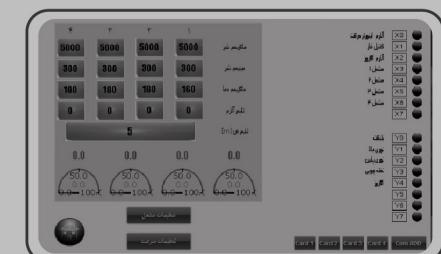
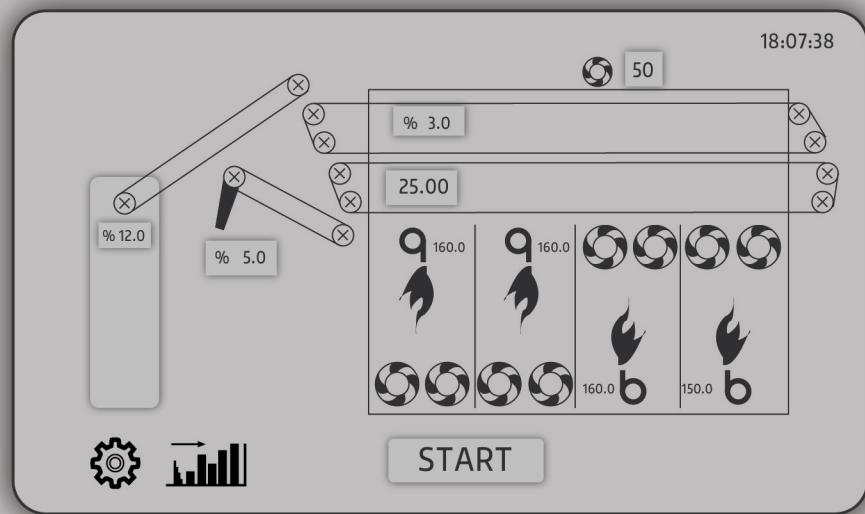
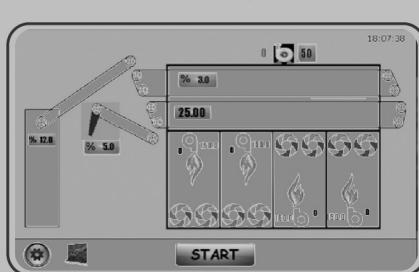
I've started working with the Mehrsan company in 2009 when they were building their first fabric drying machine. I work with them as an industrial designer and a PLC programmer. We've gone through many challenges together, such as building PID temperature control systems for dryer machines or synchronizing the speed of continuous systems. This position has helped me improve my skill-set and given me the experience of working with various industrial machines. I've learned a lot about integrating other systems and gained valuable experience working with PLCs. The challenges we've faced have pushed me to learn to be innovative and flexible.



A

Mehrsan
machineries

Dryer



The screenshot displays a mobile application interface for managing a system of fans and temperature sensors. On the left, there is a small preview window showing a physical control panel with various buttons and a digital display. The main screen features a large central area with six rounded rectangular boxes, each containing a numerical value and a descriptive label in Arabic. To the right of this area is a table mapping device addresses (ADD) to names.

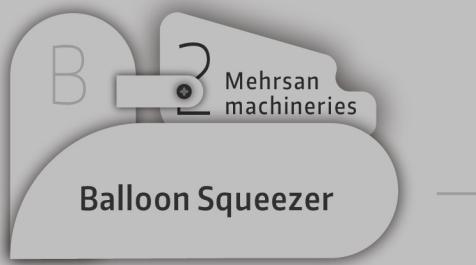
ADD	Device name
10	Fan 1
11	Fan 2
12	Fan 3
13	Fan 4
14	Fan 5
15	Fan 6
16	Fan 7
17	Fan 8
9	Exhaust
22	Blanket
21	Upper band
20	Lower band
33	Wooden belt
30	Temp 1
31	Temp 2
32	Temp 3
30	Temp 4
29	Temp exhaust

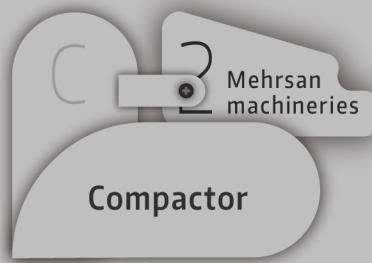
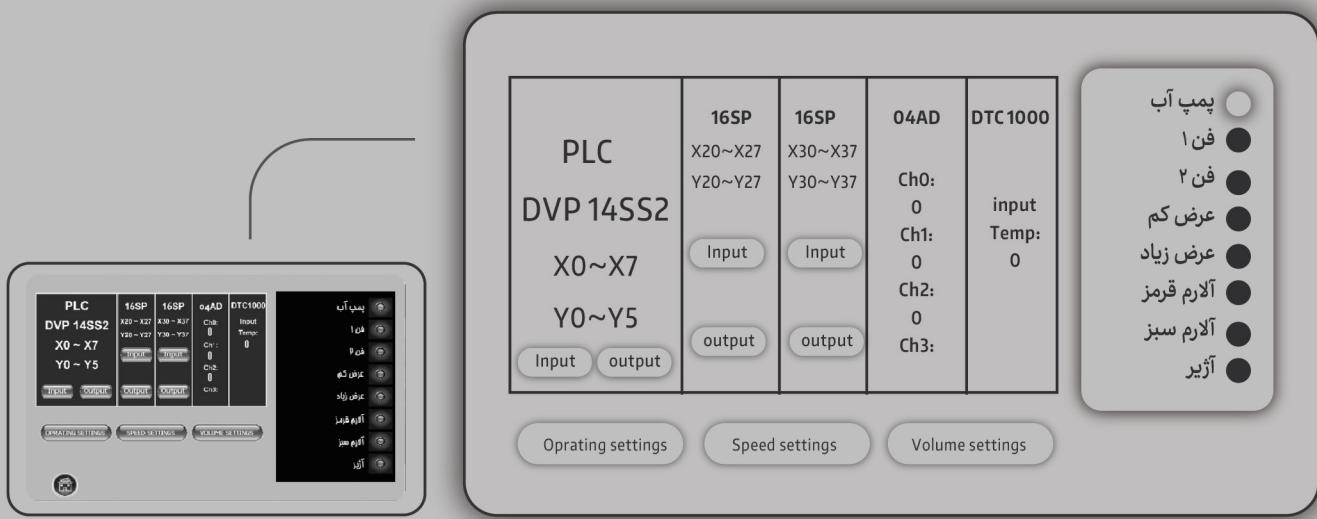
Central Labels (from top to bottom):

- ماكيزم سرعت امن (Safe Speed)
- ماكيزم سرعت بلنك (Blanket Speed)
- ماكيزم سرعت بال (Upper band Speed)
- ماكيزم سرعت پاين (Lower band Speed)
- ماكيزم سرعت نقطه جي (Wooden belt Speed)
- ماكيزم سرعت اگزو (Exhaust Speed)

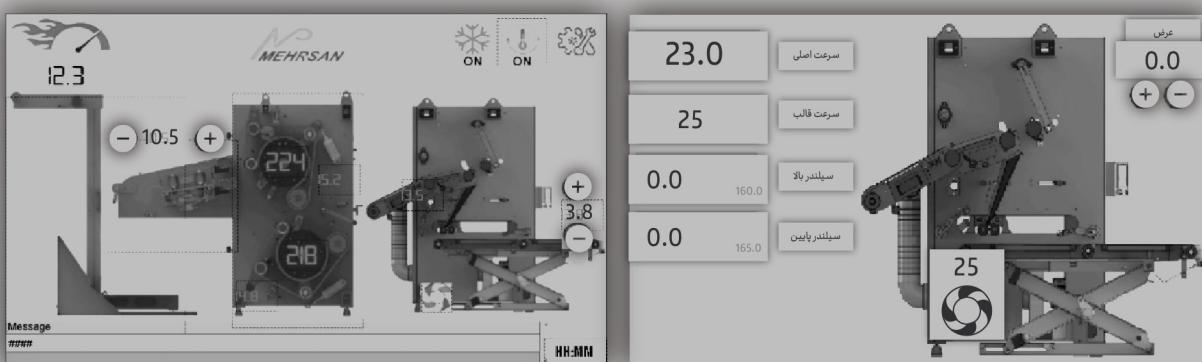
Bottom Navigation:

- Home icon
- تنظیمات مشعل (Burner Settings)
- تنظیمات سرعت (Speed Settings)
- Buttons: card1, card2, card3, card4, camADD





Compactor



D

Mehrsan
machineries

Tubular thermofix

