



TAMIN TABLO Co.

Products Portfolio



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The data and illustrations are not binding. we reserve the right to make
changes during technical developments of the product.
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Art of Quality



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TAMIN TABLO Co.

Introduction

Tamin Tablo Company, manufacturer of MV & LV switchgear, has been established in 1976 in order to provide best quality products and services for all utilities and industrial customers. Enjoying well educated and experienced team as well as utilizing of latest production technology, modern machines and methods of manufacturing, TTC ensures fulfillment of customer satisfaction. Our competency is to convert best quality materials in to excellent products.



Organization

- **Engineering & Quality Management**
 - Engineering Department
 - Quality Control
 - Quality Assurance
- **Sales Engineering & Commercial Management**
 - Local Supply Department
 - Import Department
 - Tendering Department
 - Sales & Orders
 - Customer Services
- **Planning & Production Management**
 - Projects Department
 - Planning Department
 - Production Line
 - Preventive Maintenance
- **Marketing & Export Development Management**
- **Financial & Human Resource Management**
- **Information Technology Management**

Hall of Honors

- **1999 : ISO 9002-1994 Certificate EAQA**
- **2000 : CESI Type Test Certificate Metal-Clad MV Switchgear Pre-sanctions Period**
- **2001 : SIMENS SIVACON LV MCC Manufacturing License Certificate**
- **2003 : ABB Unisafe MV Switchgear up to 24 KV Manufacturing License Certificate**
- **2005 : ABB UniGear 36 KV (Unisafe 36 KV) MV Switchgear Manufacturing License Certificate**
- **2007 : ABB Laboratories Ratingen Test Report of Compact Metal-enclosed MV Switchgear Type TT-switch with SFG Disconnectors**
- **2008 : ISO 9002**
- **2014 : Compact Substation Degree IP54**



Facilities
Medium Voltage

**Medium Voltage Switchgear
Manufacturing Plant :**
12,500 sq m Land
8,500 sq m Workshop
1,500 sq m Office

Facilities
Low Voltage

**Low Voltage Switchgear
Manufacturing Plant :**
5,000 sq m Land
2,500 sq m Workshop
600 sq m Office



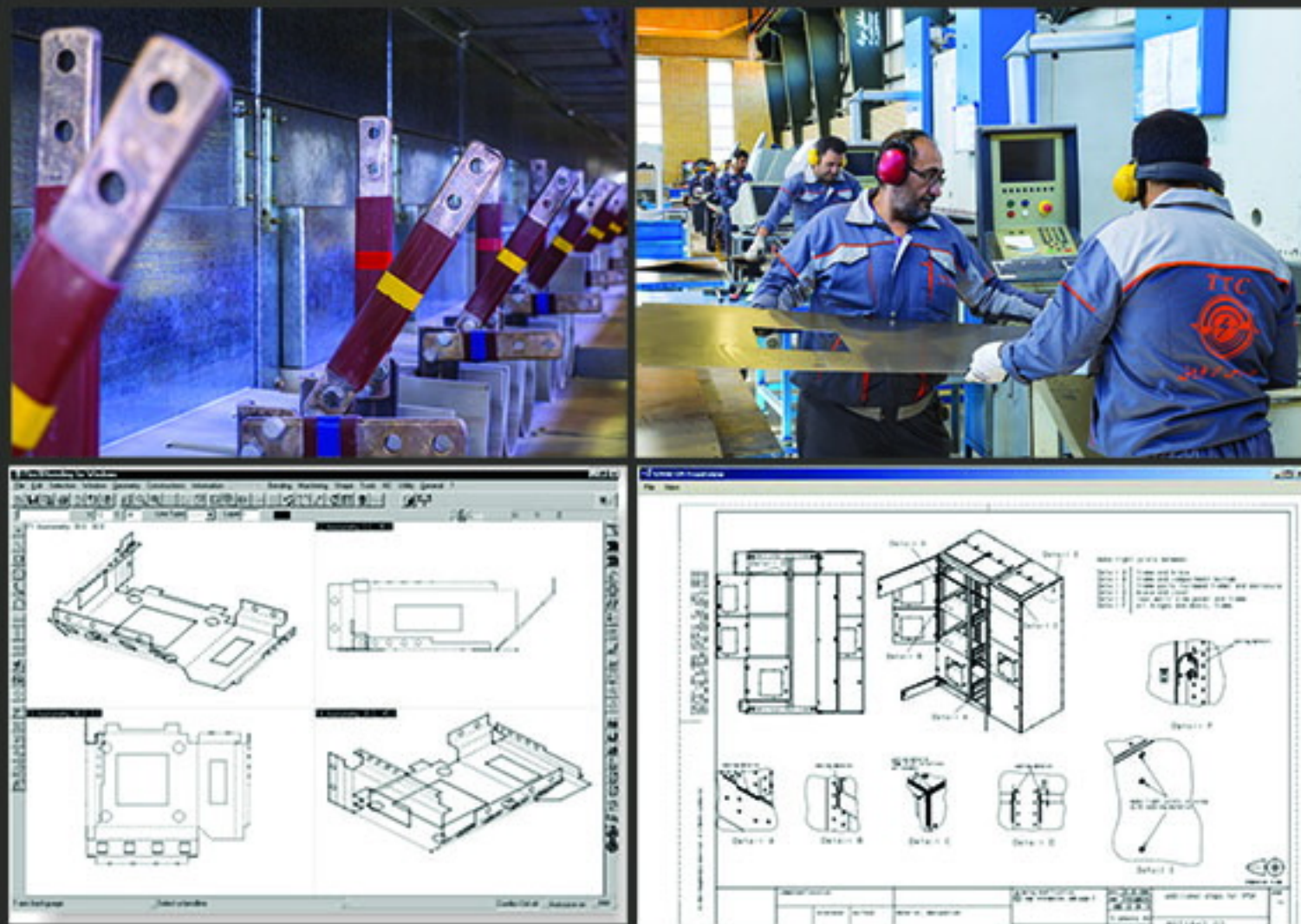
Facilities

- **Machines**

CNC/NC Punching, Bending and Cutting Machines
Roller Conveyer CNC Lines

- **Surface Coating Process**

Electrostatic Painting Workshop
Electro Plating Workshop



- **CAD/CAM Software and System**

3D Mechanical Desk Top Software, Mechanical Auto CAD, CATIA
E-plan, Top Punch, Euro Punch, Land Tech, SIMARIS Software
Engineering Server and Network

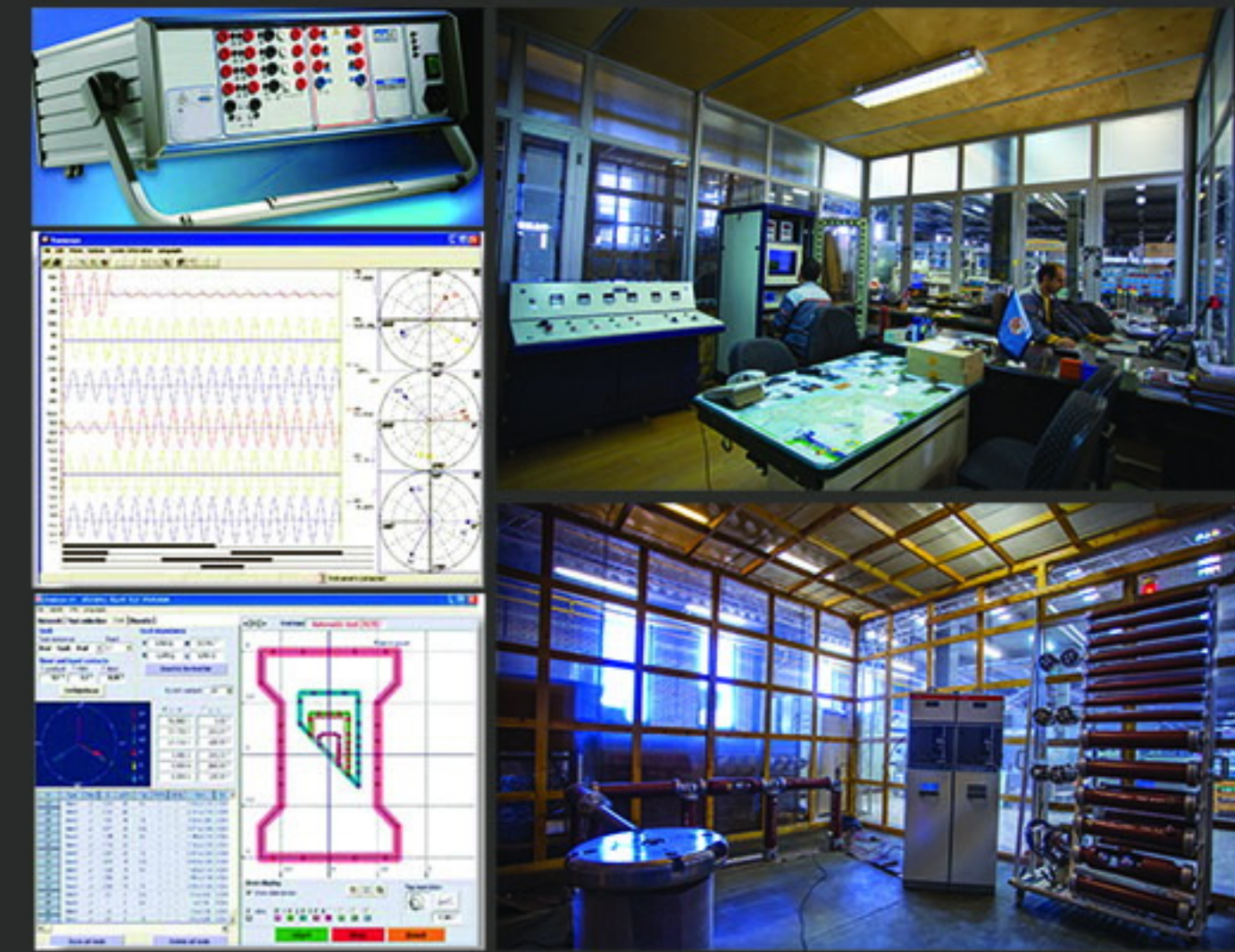
Facilities

- **Test Facilities**

Medium Voltage Test Laboratory including :

- Power Frequency Withstand Voltage Test Equipment up to 100 KV rms
- Impulse Withstand Voltage Test Generator up to 200 KV rms
- Secondary Voltage and Current Injection Relay Test Set
- Partial Discharge Test Equipment and Faraday Cage
- Primary Current Injection Test Set
- etc.

All Required Mechanical and Electrical Metering and Measuring Tools
Painting Quality Control and Thickness Test Tools



Products

• UniSafe Medium Voltage Switchgear up to 24 KV

- High performance switchgear that meets highest requirements
- Metal-clad air-insulated switchgear
- Factory-tested for indoor installations
- Complete with mechanical safety interlocks
- Guaranteed arc-proof units & compartments
- Suitable for medium voltage primary distribution
- Compartments segregated by metallic partitions
- Front access for maintenance and service operations
- LV compartment for control, protection and metering instruments
- Safety shutters & bushings between CB, busbar & cable compartments



Products

• UniGear ZS2 Medium Voltage Switchgear 36 KV

- Air insulated switchgear LSC 2B, PM
- Designed for medium voltage distribution
- Factory-tested for indoor installations
- Complete with mechanical safety interlocks
- Fully arc-proof switchgear, IAC AF-LR
- Enclosure made of galvanized sheet steel
- Compartments segregated by metallic partitions
- Front access for maintenance and service operations
- LV compartment for control, protection and metering instruments
- Safety shutters & bushings between CB, busbar & cable compartments



Technical data

Switchgear	up to	12 kV	17.5 kV	24kV
Type of construction		Metal-clad	Metal-clad	Metal-clad
Rated insulation voltage	KV	12	17.5	24
Test voltage at power frequency	KV (1 min)	28	38	50
Impulse withstand voltage	KV	75	95	125
Rated frequency	Hz	50-60	50-60	50-60
Rated short- time withstand current	KA 1s	...50	...50	...31.5
Peak current	KA	...125	...125	...63
Rated short- time withstand current	KA 3s	...40	...40	...25
Peak current	KA	...100	...100	...63
Internal arc withstand current	KA 1s	...40	...40	...25
	KA 0.5s	...50	...50	-
Main busbar rated current	A	...4000	...4000	...2500
Rated current of the branch connections	A	630 1250 1600 2000 2500 3150	630 1250 1600 2000 2500 3150	630 1250 1600 2000
Rated current of the branch connection with force ventilation	A	3600 4000	3600 4000	2500 -
Overall dimensions of basic cubicle	H [mm] W [mm] D [mm]	2160/2495 600/750/1000 1550/2000	2160/2495 600/750/1000 1550/2000	2160/2600 750/1000 1900/2300



Technical data

Switchgear	up to	36kV
Type of construction		Metal-clad
Rated voltage	KV	36
Rated insulation voltage	KV	36
Rated power frequency withstand voltage	KV (1 min)	70
Rated lightning impulse withstand voltage	KV	170
Rated short-time withstand current	KA (3s)	31.5
Peak current	KA	80
Internal arc withstand current	KA (1s)	31.5
Main busbar rated current	A	...2500*
Branch connection rated current	A	...2500

Typical Units

Depth (mm)		2400	2600
Height (mm)	25 KA (3s)	2161	2161
	31.5 KA (3s)	2310	2310
Height with gas exhaust duct (mm)		2662	2662
Width (mm)		1000	1200

* 4000 A on request



Products

• TT-Switch Medium Voltage Compact Switchgear

- Compact solution suitable for full distribution automation
 Compartments made of galvanized sheet steel
 Air insulated (AIS), metal enclosed switchgear
 Light gray powder painted (RAL 7035)
 Type tested in ABB laboratory in Germany
 Flexible and high reliable, switchgear
 Wide application range such as :
- Power mills
 - Rail way system
 - Cement plants
 - Hospital & high rising buildings



Products

• Providing clients with flexible options for different environments

- All interconnections are entirely factory built and tested
 Includes control devices with corresponding wiring
 High operation reliability
 Provisions for remote monitoring and control of switching devices on MV or LV side
 Adequate space for inspection and maintenance of transformer
 Safe operation
 Simplicity of installation



Technical data

Rated voltage Ur		12 kV	17.5 kV	24kV
Type of construction		Metal-enclosed	Metal-enclosed	Metal-enclosed
BIL		KV	75	95
- Common value			85	110
- Across the isolating distance				145
AC withstand voltage		KV	28 (1)	38 (1)
- Common value			32 (1)	45 (1)
- Across the isolating distance				60
Rated frequency		Hz	50/60	50/60
Rated current		A	630/1250	630/1250
Busbar		A	630/800/1250 4)	630/800/1250 4)
Feeder		A	630/1250 4)	630/1250 4)
Rated short-time withstand current		KA	25	20
Main circuit		KA	25	20
Earthing circuit		KA	25	20
Rated peak withstand current		KA	65	50
Rated duration of short circuit		s	1	1
Internal arc-fault current, 1s		KA	20	20
Degree of protection (IP-code)			IP2XC	IP2XC
For the enclosure			IP2X	IP2X
For the partitions			IP2X	IP2X
Ambient temperature		[C]	+40	+40
- maximum value			+35	+35
- maximum value of 24 h-mean			-5 3)	-5 3)
- minimum value				
Altitude above seas level		[m]	≤1000 2)	≤1000 2)
Dimension		[mm]	750	750
Width / circuit breaker cubicle			375/500	375/500
Width / other cubicles			1635/1885	1635/1885
Height			940+60	940+60
Depth			450	450
Height / LV-compartment				

TTC
Technology



1) Higher values in accordance with national standards on request
 2) Adjustment is necessary for greater altitudes
 3) Lower ambient temperature on request
 4) 1250 A+ CBW, SBW, BRG, DBC

Products

• SIVACON 8PT - The Versatile Low-Voltage Switchgear

- Standardized busbar position at the top of the cubicle
- Deep switchgear compartment for universal installation
- Rated peak withstand current I_{peak} up to 375 kA
- 3- and 4 - pole busbar system up to 7400 A
- Modular structure of device compartments
- Single-front and back-to-back installation
- Type-tested standard modules (TTA)
- Cable lead-in from above and below
- Cable connection from the front or rear
- Rapid replacement without interrupting the operation

Products

• LV & MV Capacitor banks and Harmonic Filters

- Suitable for severe harmonic pollution applications
- Intelligent reactive power controller
- Network harmonic filtering
- Robust & modular structure
- Suitable for indoor & outdoor installation
- Power factor correction of reactive loads



Technical data

Rated operational voltage U_n	V	690	
Rated insulation voltage U_i	V	1000	
Rated impulse withstand voltage U_{imp}	KV	8	
Rated current Main horizontal busbar	A	up to 7400	
Rated current Vertical busbar for withdraw able-unit design	A	up to 1200	
Rated peak withstand current I_{peak} Main horizontal busbar	KA	up to 375	
Rated current Vertical busbar for circuit breakers	A	up to 6300	
Rated peak withstand current I_{peak} Vertical busbar for circuit breakers	KA	up to 250	
Switchgear rated current	Circuit breakers Outgoing feeders	A A	up to 6300 up to 630
Internal separation	Form 1 to Form 4	IEC 60439-1, section 7.7, DIN EN 60439-1	
Surface treatment	Frame parts/Enclosure/Doors	galvanized powder - coated	
Degree of protection	to IEC 60529, EN 60529	IP30 to IP54	
Dimension	H [mm] W [mm] D [mm]	2200/2600 600/800/1000/1200 600/800/1000/1200	



• Control & Protection Panels For High-Voltage Substations

PROTECTION PANEL

- Front door with inspection window
- Swing frame as option
- Cable entrance from bottom or top
- Degree of protection up to IP54

• CONTROL PANEL

- Fix front cover & rear access
- Supplied with mimic diagram (on request)
- Cable entrance from bottom or top
- Degree of protection up to IP54

