

2. System's technical specifications

2.1 Machines

Machine:	ETCHSTAR 650
Model:	ELO-CHEM ALKALINE SOLUTION
Serial N°:	EPC 107011
Fabrication year:	2007
Final use:	Modular machine for Alkaline etching solution in the manufacture of flat boards.

2.2 Diagrams and assembly drawings

Overall Dimensions DWG:	LEP 36112
Internal Cross Sections DWG:	LEP 36112
Other DWG:	--

2.3 Characteristics

Overall dimensions:

- Length (mm):	7070
- Maximum Width (mm):	2000
- Maximum Height (mm):	1400

Electrical cabinet:

- Length (mm):	1800
- Width (mm):	37000
- Height (mm):	1200

2.4 Installed energies and products

Electric power

Main line:	tri-phase net with grounded neutral
Power circuit:	400V ac – 50Hz – 32kW – 86A
Control circuit:	24V dc

Compressed air

Pressure:	6bars
Capacity (consumption):	negligible





Caloric cooling energy

Etching Module

Caloric energy (kcal): 5500
Inlet heating fluid temperature (°C): Max. 10, Min. 3
Minimum capacity (l/h): 1000

Tin Strip Module

Caloric energy (kcal): 3000
Inlet heating fluid temperature (°C): Max. 10, Min. 3
Minimum capacity (l/h): 700

Note: EXOTHERMIC REACTION NON INCLUDED

Air exhaust:

MAIN ETCHING CHAMBER

Type of connection: smooth PVC pipe Øe160 mm
Capacity (m3/h): from 200 to 400 in production with closed hatches (to be defined according with the process requirement)
from 500 to 800 in maintenance with hatches open.
Pressure (mmH2O): from 50 to 100 (to be defined according with the process requirement)

CHEMICAL and RINSE MODULES

Type of connection: smooth PVC pipe Øi50 mm
Capacity (m3/h): from 200 to 400 (to be defined according with the process requirement)
Pressure (mmH2O): from 50 to 100 (to be defined according with the process requirement)

DRYER MODULE

Type of connection: smooth SS pipe Øi110 mm
Capacity (m3/h): from 500 to 600 (to be defined according with the process requirement)
Pressure (mmH2O): from 50 to 100 (to be defined according with the process requirement)

Products:

Mains water pressure/capacity (bar-l/h): 2+3 bar, 600÷1200 l/h
Demineralised water pressure/capacity (bar-l/h): N.A.
Inflammable products: N.A.
Neutral gases: N.A.
Acids a/o bases: Alkaline etching solution, Nitric acid based tin stripper solution



Toxic products:

See products used safety advice, normally contained in the it's data sheet.

Other:

N.A.

2.5 Characteristics of permissible panels

Dimensions

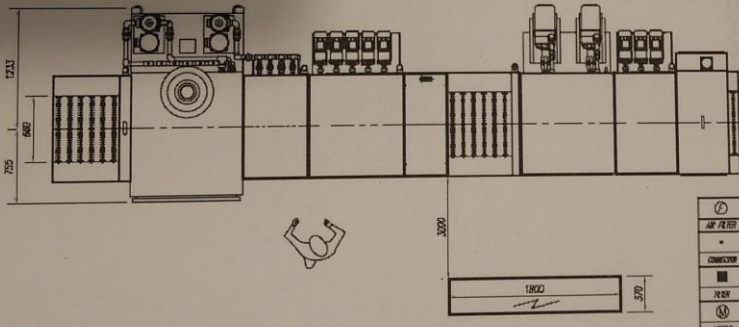
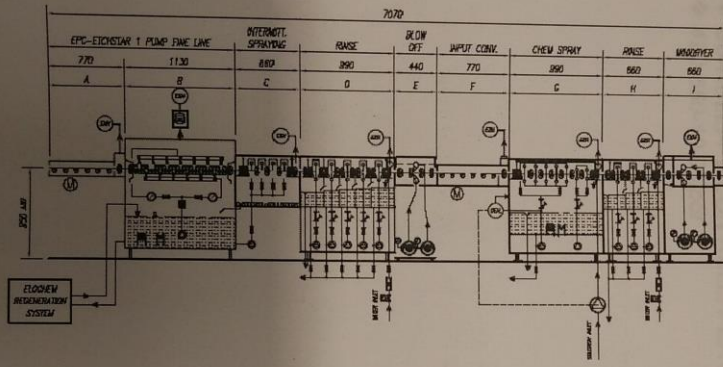
- Minimum length (mm):	200
- Maximum length (mm):	1000
- Minimum width (mm):	100
- Maximum width (mm):	650
- Minimum Thickness (mm):	0,1 (base material)
- Maximum Thickness(mm):	6

NOTE:

The above specified minimum thickness values are indicative, and depend on the type of boards to be processed. Correct values are determined only by practical testing.

16-04-07

EPC-M-107011



SYMBOLS										SCHEMATIC CROSS SECTION		
	AIR FILTER		OPEN VALVE		ALARM		CONTROL VALVE		CONTROL VALVE			
	CHEMICAL TANK		CONTROL VALVE		CONTROL VALVE		CONTROL VALVE		CONTROL VALVE			
	PUMP		CONTROL VALVE		CONTROL VALVE		CONTROL VALVE		CONTROL VALVE			
	MOTOR		CONTROL VALVE		CONTROL VALVE		CONTROL VALVE		CONTROL VALVE			
	TANK		CONTROL VALVE		CONTROL VALVE		CONTROL VALVE		CONTROL VALVE			

ETCH-TIN STRIP LINE 650	
DRAWING NUMBER	SCALE
DWG. LEP 38712	1:30
DATE	DATE
HIRELAP	20-12-2007

Leiterplattentechnik / Industrievertretung