

Potato Chips Line Details

1) Storage Tank

Description: Stores fresh potato and feeds De-stoning & Washing Machine through a chain-conveyor

❖ Components:

- Belt-Conveyor (Food-Grade)
- AC Motor
- AC Inverter
- Inverter Panel
- Sensor automation

❖ Tank Specifications:

- Material: Food-Grade Stainless Steel
- Capacity: 1000 Kg

❖ Motor Specifications:

- 0.75 KW
- 380 V
- 2.10 A

❖ Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Dimensions:

- Length: 290 cm
- Width: 210 cm
- Height: 210 cm





2) Chain-Conveyor

Description: Transports fresh potato from Storage Tank to De-stoning & Washing Machine

- ❖ Components:
 - Stainless Steel Chain
 - AC motor
 - AC inverter
 - Inverter Panel
 - Sensor automation
- ❖ Motor Specifications:
 - 1.1 KW
 - 380 V
 - 2.29 A
- ❖ Inverter Specifications:
 - 3 Hp
 - 380 V
 - 3 Phase
- ❖ Chain Dimensions:
 - Length: 300 cm
 - Width: 57 cm



3) De-stoning and Washing Machine

Description: Removes the stones, washes the potato and feeds Peeling Machine through a chain-conveyor

- ❖ Components:
 - Stainless Steel Drum
 - Water pipe & sprayer
 - AC motor
 - AC inverter
 - Inverter Panel
 - Sensor Automation
- ❖ Motor Specifications:
 - 0.37 KW
 - 380 V
 - 1.15 A
- ❖ Inverter Specifications:
 - 3 Hp
 - 380 V
 - 3 Phase
- ❖ Dimensions:
 - Length: 280 cm
 - Width: 140 cm
 - Height: 240 cm



4) Chain-Conveyor

Description: Transports fresh potato from De-stoning & Washing Machine to Peeling Machine

- ❖ Components:
 - Stainless Steel chain
 - AC motor
 - AC inverter
 - Inverter Panel
 - Sensor Automation
- ❖ Motor Specifications:
 - 1.1 KW
 - 380 V
 - 2.29 A
- ❖ Inverter Specifications:
 - 3 Hp
 - 380 V
 - 3 Phase
- ❖ Dimensions:
 - Length: 300 cm
 - Width: 57 cm



5) Peeling Machine (Brand: 'VANMARK')

Description: Peels the potato and feeds the roller-conveyor

❖ **Components:**

- 6 cylindrical peelers
- 1 cylindrical cleaning brush
- 1 spiral cylinder
- Stainless Steel Cover
- AC motor
- AC inverter
- Inverter Panel
- Sensor Automation

❖ **Motor Specifications:**

- 10 Hp
- 380 V



- 12.7 A
- ❖ Inverter Specifications:
 - 10 Hp
 - 380 V
 - 3 Phase
- ❖ Dimensions:
 - Length: 300 cm
 - Width: 90 cm
 - Height: 220 cm



6) Roller-Conveyor

Description: Transports peeled potato from Peeling Machine to the Singulator

❖ Components:

- AC motor
- AC inverter
- Inverter Panel
- Sensor Automation

❖ Motor Specifications:

- 1.1 KW
- 380 V
- 2.29 A

❖ Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Dimensions:

- Length: 300 cm
- Width: 100 cm
- Height: 150 cm



7) Chain-Conveyor

Description: Transports peeled potato from roller conveyor to the Slicer

❖ Components:

- Stainless Steel chain
- AC motor
- AC inverter
- Inverter Panel
- Sensor Automation

❖ Motor Specifications:

- 0.75 KW
- 380 V
- 2.1 A

❖ Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Dimensions:

- Length: 300 cm
- Width: 110 cm
- Height: 335 cm



8) Singulator

Description: lines-up peeled potato and feed it to the slicer one-by-one

❖ Components:

- 2 cylinders (Stainless Steel)
- AC motor
- AC inverter
- Inverter Panel
- Sensor Automation

❖ Feeding-cylinders

Motor Specifications:

- 1.1 KW
- 380 V
- 2.29 A

❖ Feeding-cylinders

Inverter

Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Dimensions:

- Length: 150 cm
- Width: 130 cm
- Height: 270 cm



9) Slicer (Brand: 'URSCHEL')

Description: slices the potato and feeds the Blancher

❖ Components:

- Water pipe & sprayer
- AC motor
- Security Sensors
- Sensor Automation

❖ Slicer Motor Specifications:

- 2 Hp
- 380 V
- 3.1 A

(Controlled by ON/OFF switch from Control Panel)

❖ Role of Security Sensors:

Turns off the slicer in case the cover is opened



10) Blancher

Description: removes starch from sliced potato by hot water – Washes the potato by water – Removes extra water from potato by vibration, then by an air-blowing (fan) system – Collects the dirt-residues

❖ Components:

- Stainless Steel Drum
- Stainless Steel Chain
- Dewatering Vibrator
- Drying Fan
- Steam pipe with electric valve
- AC motor (x4)
- AC inverter (x3)
- Inverter Panel (x3)
- Sensor Automation

❖ Drum Motor Specifications:

- 1.5 Hp
- 380 V
- 2.85 A

❖ Drum Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Chain Motor Specifications:

- 1 Hp
- 380 V
- 1.85 A

❖ Chain Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Vibrator Motor Specifications:

- 1 Hp
- 380 V
- 1.85 A

❖ Vibrator Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Fan Motor Specifications:

- 6.3 KW
- 380 V
- 14 A

(Controlled by ON/OFF switch from Control Panel)

❖ Role of Security Sensors:

Turns off the slicer in case the cover is opened

❖ Dimensions:

- Length: 650 cm
- Width: 180 cm
- Height: 240 cm



10.1) Dirt-residue Remover

Description: removes the remaining particles washing from the blancher

❖ Components:

- Stainless Steel chain
- Water pump
- Water pipe with electric valve
- AC motor (x2)
- Sensor Automation

❖ Chain Motor Specifications:

- 0.37 KW
- 380 V
- 1.05 A

(Controlled by ON/OFF switch from Control Panel)

❖ Pump Motor Specifications:

- 5.5 KW
- 380 V
- 11.4 A

(Controlled by ON/OFF switch from Control Panel)



11) Dewatering

Description: removes extra water from sliced potato and feeds the Fryer

❖ Components:

- Stainless Steel chain
- AC motor
- AC inverter
- Inverter Panel
- Sensor Automation

❖ Motor Specifications:

- 0.75 KW
- 380 V
- 2.1 A

❖ Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Dimensions:

- Length: 250 cm
- Width: 125 cm



12) Fryer

Description: Fries the potato chips and collects frying residues

❖ Components:

- Blade chain
- Stainless Steel chain (x3)
- AC motor (x5)
- Crane (for cover)
- HMI
- PLC
- Control Panel
- Sensor Automation

❖ Blade Chain Motor Specifications:

- 1.1 KW
- 380 V
- 2.97 A

❖ Blade Chain Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Frying Chain Motor Specifications:

- 1.1 KW
- 380 V
- 2.97 A

❖ Frying Chain Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ De-oiling Chain Motor Specifications:

- 0.75 KW
- 380 V
- 2.1 A



❖ De-oiling Chain Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Frying-residues Chain Motor Specifications:

- 0.37 KW
- 380 V
- 1.05 A

(Controlled by ON/OFF switch from Control Panel)

❖ Crane Motor Specifications:

- 1.5 KW
- 380 V
- 3.75 A

(Controlled by ON/OFF switch from Control Panel)

❖ Dimensions:

- Length: 1070 cm
- Width: 180 cm
- Height: 250 cm



13) Salting Machine

Description: salts the potato chips after frying

- ❖ Components:
 - Stainless Steel chain
 - AC motor
 - AC inverter
 - Inverter Panel
 - Heaters (x2)
 - Sensor Automation
- ❖ Motor Specifications:
 - 0.75 KW
 - 380 V
 - 2.1 A
- ❖ Inverter Specifications:
 - 3 Hp
 - 380 V
 - 3 Phase
- ❖ Dimensions:
 - Length: 70 cm
 - Width: 115 cm



14) De-oiling Cooling Vibrator (Phase 1)

Description: first phase of removing the oil from fried chips

❖ Components:

- Stainless Steel Vibrator
- AC motor
- AC inverter
- Inverter Panel
- Sensor Automation

❖ Motor Specifications:

- 0.75 KW
- 380 V
- 2.1 A

❖ Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Dimensions:

- Length: 230 cm
- Width: 125 cm



15) De-oiling & Quality Control Belt (Phase 2)

Description: second phase of removing the oil from fried chips and cooling it. Also feeds the Flavoring Drum

❖ Components:

- AC motor
- AC inverter
- Inverter Panel
- Sensor Automation

❖ Motor Specifications:

- 0.37 KW
- 380 V
- 1.15 A

❖ Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Belt Dimensions:

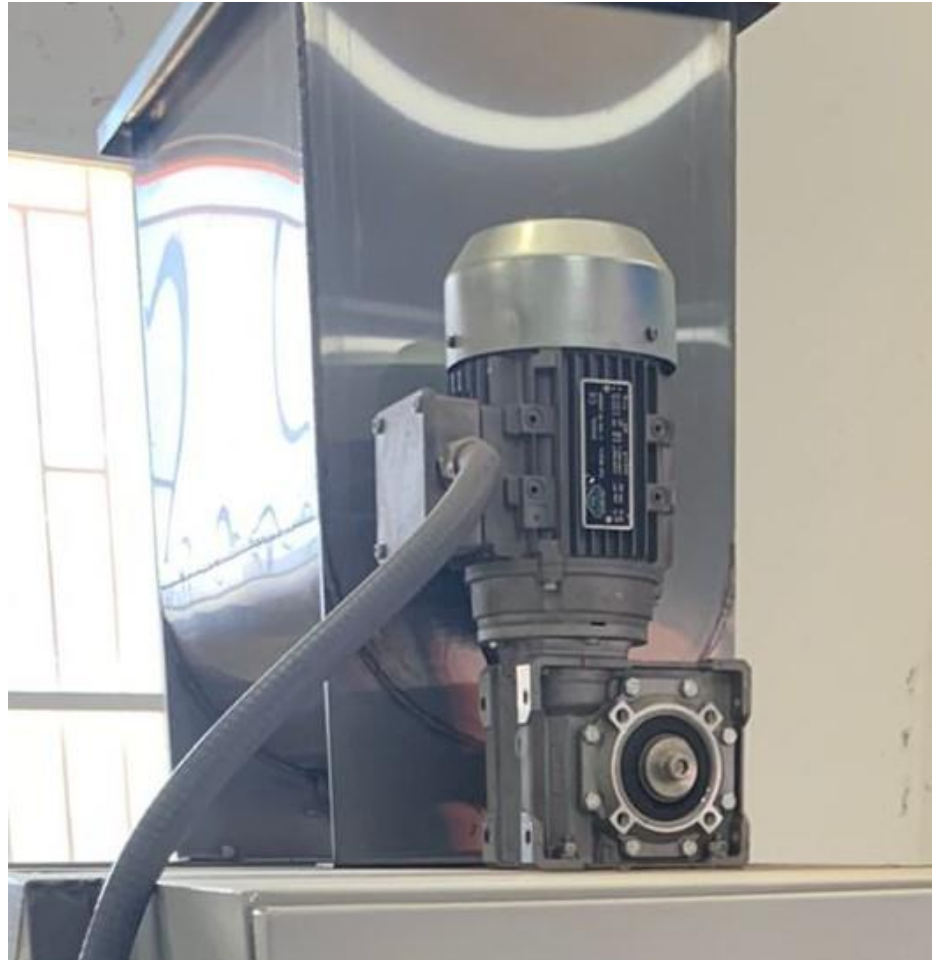
- Length: 300 cm
- Width: 100 cm



16) Flavoring Machine

Description: prepares the flavor and sends it to the flavoring drum

- ❖ Components:
 - AC motor
 - AC inverter
 - Inverter Panel
 - Sensor Automation
- ❖ Motor Specifications:
 - 0.37 KW
 - 380 V
 - 1.15 A
- ❖ Inverter Specifications:
 - 3 Hp
 - 380 V
 - 3 Phase
- ❖ Dimensions:
 - Length: 120 cm
 - Width: 60 cm
 - Height: 200 cm



17) Flavoring Drum

Description: mixes the flavor with potato chips

❖ Components:

- Stainless Steel Drum
- AC motor
- AC inverter
- Inverter Panel
- Sensor Automation

❖ Motor Specifications:

- 0.75 KW
- 380 V
- 2.1 A

❖ Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Dimensions:



- Length: 200 cm
- Width: 125 cm
- Height: 170 cm



18) Oil Tanks

Description: stores the oil and feeds the fryer through a pump controlled from fryer's PLC

❖ Components:

- Stainless Steel Cylindrical tanks
- Heaters (x2)
- Oil pump

❖ Motor Specifications:

- 0.75 KW
- 380 V
- 2.1 A

❖ Inverter Specifications:

- 3 Hp
- 380 V
- 3 Phase

❖ Tank Dimensions:

- Diameter: 93 cm
- Height: 150 cm



19) Oil Boiler (Brand: 'WEISHAUPT')

Description: diesel boiler for heating the frying oil

❖ Boiler Dimensions:

- Length: 700 cm
- Width: 200 cm
- Height: 255 cm

Max Weishaupt GmbH, D-88475 Schwendi, Germany www.weishaupt.de			
Burner type	WM - L20/3-A	monarch®	
Version	R	Destination Country	
Serial-Nr.	40648580	Cat.	
Year of manuf.	2021	Gas family	
Gas	min.	max.	kW
Supply press.	min.	max.	mbar
Fuel Oil	min. 800	max. 2600	kW
Oil EL	PS 30 bar	NOx-Cl. 2	
Control voltage	220 V, 1 ~,	50 Hz	10 A gl
Mains voltage	380 V, 3 ~, N, PE	50 Hz	IP 54
any Elec. rating	5,14 kW	kW	





20) Oil Pump

Description: provides oil circulation between fryer and boiler

❖ Components:

- AC motor
- AC inverter
- Inverter Panel
- Sensor Automation

❖ Motor Specifications:

- 25 Hp
- 380 V
- 32 A

❖ Inverter Specifications:

- 25 Hp
- 380 V
- 3 Phase

