

# SEMIX CT 90

## STATIONARY CONCRETE BATCHING PLANTS



SMX-F-2401171700-12

### PROPOSAL

GMA MACHINERY

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Delivery

8-12 weeks

Validity Of Offer

01-02-2024

Terms Of Payment

%50 Advance, %50 Before Shipment



## SEMIX CT 90 STATIONARY CONCRETE BATCHING PLANT

DESCRIPTION	AMOUNT	UNIT PRICE	TOTAL PRICE
1) SEMIX CT 90 STATIONARY CONCRETE BATCHING PLANT	1	€190,000.00	€190,000.00
1.1) CT90 STATIONARY CONCRETE BATCHING PLANT'S TOTAL CAPACITY: 90 M <sup>3</sup> /H	1	-	-
1.2) MIXER TYPE & CAPACITY: 2250/1500 (1.5 M <sup>3</sup> ) SEMIX SINGLE SHAFT CONCRETE MIXER	1	-	-
1.3) MIXER MOTOR POWER : 1X45 KW	1	-	-
1.4) AGGREGATE BIN CAPACITY : 4 X 15 = 60 M <sup>3</sup>	1	-	-
1.5) AGGREGATE WEIGHING SYSTEM: WEIGHING CONVEYOR BELT	1	-	-
1.6) AGGREGATE TRANSFER MECHANISM : TRANSFER CONVEYOR BELT	1	-	-
1.7) COMPRESSOR : PRESENT	1	-	-
1.8) CEMENT WEIGHING HOPPER: 800 KG	1	-	-
1.9) WATER WEIGHING HOPPER: 500 KG	1	-	-
1.10) ADDITIVE WEIGHING HOPPER: 20 LITRES	1	-	-
1.11) ADDITIVE PUMPS: 1	1	-	-
1.12) CONTROL CABINE: PRESENT	1	-	-
1.13) ELECTRICAL PANEL COMPONENTS: SCHNEIDER (INCLUDING PLC)	1	-	-
1.14) SOFTWARE: SEMIX (SQL BASED)	1	-	-
		Subtotal:	€190,000.00
		Discount:	-€20,000.00
		Total:	€170,000.00
TRANSPORTATION			
		CT 90 - (EXW Ankara)	€0.00
		General Total:	€170,000.00

## OPTION 1

DESCRIPTION	AMOUNT	UNIT PRICE	TOTAL PRICE
1) CEMENT SILO 100 TONS BOLTED TYPE	2	€23,000.00	€46,000.00
1.1) SCREW CONVEYOR Ø273 MM	2	-	-
1.2) SILO EQUIPMENTS SET	2	-	-
1.3) SILO FILTER	2	-	-
		Subtotal:	€46,000.00
		Total:	€46,000.00
TRANSPORTATION			
		General Total:	€46,000.00



## A Semi Mobile Approach to Stationary Concrete Batching Plants

**SEMIX's** engineers evaluated a design that can, in effect, function as a stationary building but, at the same time, be mobile as portable concrete batching plants. CT90 Compact Concrete Batching plant is designed for quick installation and easy transportation. It's perfect for mid-scale projects that needs efficiency. Most of the components (such as pneumatic installations, water and additive pipings, electrical wirings) are pre-assembled at SEMIX's factory. These applications help prevent wasted time on the site, which is crucial during installation.

## Long Lasting Steel Form

All of **SEMIX** Concrete Batching Plants have been formed from the strongest steel form which is able to serve many years.



## SEMIX Concrete Mixers

In SEMIX CT 90 Concrete Batching Plants 1.5 m<sup>3</sup> capacity of single shaft concrete mixers are used. Depending on the required homogeneity in concrete production, both options can be delivered for compact concrete batching plants.

## 1.5 m<sup>3</sup> Single Shaft Concrete Mixer

Brand & Model : Semix SM 2250 / 1500 lt – Horizontal **Single Shaft Mixer**

Loading Capacity : 2250 lt

Compacted Concrete Capacity : 1500 lt

Electric Motor : 45 kW GAMA/VOLT-1 Unit, with thermic overload switch protection



### Mixing Blades & Wearing Plates

Mixing Blade : Ni-Hard 4 (**Chrome, Nickel special alloy cast iron**)

Stripping Blade : Ni-Hard 4 (**Chrome, Nickel special alloy cast iron**)

Internal Wearing : **HARDOX 450**

Ni-Hard 4 : In all **SEMIX Concrete Mixers**, Ni-Hard 4 alloys are being used in mixer blades. NiHard 4 is a high-strength cast iron alloy that contains 4% nickel and has a tensile strength of up to 1,200 MPa. The nickel in NiHard 4 creates a tough surface that resists abrasion, while the hardening agents make the alloy harder and more resistant to deformation. This structure is ideal for products under conditions of high abrasiveness and high impact conditions. It is commonly used in applications that require high strength. NiHard 4 has a very low coefficient of thermal expansion, which makes it ideal for use in high-temperature applications. NiHard 4 is a type of steel that is very strong and resistant to wear and tear. It is commonly used in industrial applications where durability is key.



Lubrication : 4 Points Automatic Lubrication System **SKF - LINCOLN (German)**

Automatic lubrication system is integrated with the PLC and SCADA, the system periodically lubricates the necessary points and preventing from major problems. These systems use sensors to detect the level of lubricant present and dispense the appropriate amount automatically.



Discharge Door : 1 Unit / **Hydraulic**

Discharging in Emergency Situations : Present - Manual Pump

Water Dispenser : Present - 1 Unit

Emergency Stop Button : Present - 1 Unit

Maintenance Door Safety Switch : Present - 1 Unit



## Weighing Hoppers

Cement Weighing Capacity : 800 kg  
Cement Weighing Load-cells : 3 units 500 kg  
Water Weighing Capacity : 500 kg  
Water Weighing Load-cells : 2 units 500 kg  
Additive Weighing Capacity : 1 x 20 lt  
Additive Weighing Load-cells : 1 unit 100 kg



## Weighing Hopper Equipments

**Cement Discharge Valve** : Ø 350 mm Butterfly Type - **WAM (Italy)**  
**Cement Hopper Vibrator** : 1 unit - **OLI (Italy)**  
**Water Discharge Valve** : Ø 200 Butterfly Type mm - **WAM (Italy)**  
**Additive Discharge Valve** : 1 Unit - 1 ½" ball valve with actuator

## Aggregate Storage Bin

Aggregate Bins Capacity&Quantity : 60 m<sup>3</sup> – 15 m<sup>3</sup> capacity each one – 4 bins (Linear)

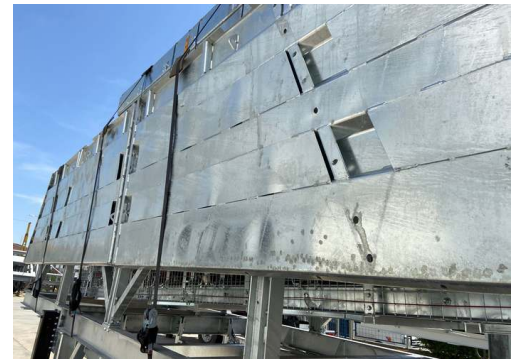
Bunker Discharging Gate(s) : 2 Gates in each bin – Totally 8 Discharging Gates

Vibrator Brand & Capacity : 350/3 – 2 Units **WAM-OLI (Italy)**

Pneumatic Piston Brand & Capacity : DSBC 80-250 Piston 8 Units – **Festo (Germany)**

Pneumatic Valve : 8 Units – **Festo (Germany)**





With trapezoidal bending for aggregate bin covers a high strength can be reached. In SEMIX's aggregate storage hoppers, extra reinforcement steels are welded to the empty spaces in the trapezoid. Thanks to this method, aggregate storage bins can serve long years.

## Weighing Conveyor

Belt Quality : EP 125 / 4 coats

Vibrator : 1 Unit - **WAM-OLI (Italy)**

Drums : 10 mm Rubber Coated

Bearings : Lubrication Grease Nipple over SNH series

Scraper : V type with its weights -1 Unit

Emergency Stop Button : 1 Unit

Pull-rope Switch : 1 Unit



## Transfer Conveyor

Belt Quality : EP 125 / 4 coats

Bearings : Lubrication Grease Nipple over SNH series

Scraper : V type with its weights -1 Unit

Emergency Stop Button : 1 Unit

Pull-rope Switch : 1 Unit

Covering over the Belt : Semi-closed with steel sheet

## Grid Blasting Before Painting



All components of the SEMIX's concrete batching plants are treated with Grit Blasting process in SEMIX's certified grit blasting facility before the painting with steel balls. This method provides high surface finish quality after the painting.

## CONTROL CABIN & AUTOMATION SYSTEM



Air conditioner, electrical connections and lightening - present at control cabin. Power board with manual control system provides production options completely at automatic - mode as well as manual mode. Power board includes safety system protection switches for motors (phase protection relay), circuit breaker in case of overload. All electrical components are SCHNEIDER brand. Full set of computer for automation system with printer/UPS - present.

### AUTOMATION SYSTEM:

**Production Screen;** You can monitor process of the operation on the animation screen, which is infrastructure by Microsoft DirectX. During the producing, required values, measurement values and differences of values will be shown. Following of the measured will be checked by the system during the process and it will be shown on automation screen with error sound if there is a problem. It can add or discharge water automatically without changing value of cement, during the process.

**Entering;** You can change the value of production to add or discharge while you are producing your order. You can portray unlimited customer, target, transfer with different drivers. Definition of silo and material can be changed and checked by the operator easily on the computer.

**Settings;** The automation system uses lots of parameters, that was designed to be understandable easily for any user; to get most efficient performance. Also, the settings can be locked not to be changed by workers.

**History;** When user want, he can checked old production records or details. And if there is need, the old production records or details can be printed any time.

**Reporting;** The program saves unlimited production record in database, so you can get report (production, receipt, customer, field work, etc.) with different time periods as daily, weekly, monthly, yearly when it is needed. Reports can be printed or forward them to excel or PDF files. Also, Stock reports can be get at the same way.

**Delivery Note;** You can print delivery note after or before the manufacture. If you don't want to print at that time, you can print them from the database when it is needed. Also you can split or merge manufactures' delivery note when it is needed them. After manufacturing, if customer changes, You can change the new customer and reprint a new delivery note.

**User Permissions;** You can limit operators or any user permissions when it is needed.

**Manufacturing from Orders;** You can define daily order list to the program and ordered lists can be produced through the program. You can monitor orders produced and remaining time by time.

**Planned Manufacture;** Before manufacturing is completed, you can enter the next production to program. If you save the next production record to program, after the last production finish, the next production will start automatically.

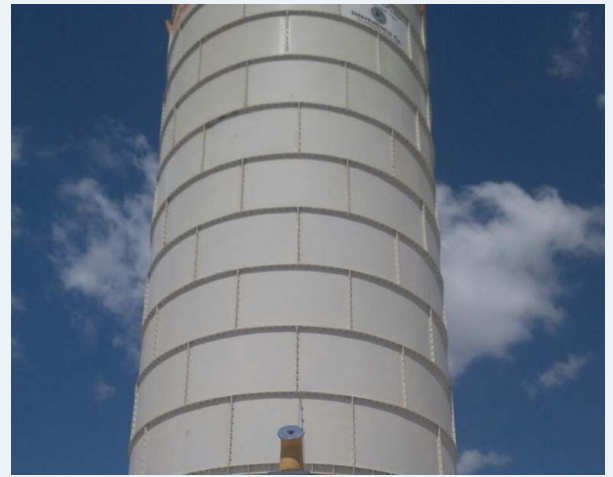
**Internet;** The program is designed to be controlled via the internet. By via internet, you can do reporting, editing, deleting or viewing (receipts, field work, customers, production details, etc. ). Also, you can create, remove or edit order records for defined user rights. Reports may print or save on PDF, Excel by using via internet. For using via internet, you should get a static ip. Infrastructure for internet ( staticip, internet line, etc. ) will be provided by yourself. P.S.: Internet features are optional and requires additional charge.

**Remote Support;** If you have an internet connection in cabin, we can help and solve problems quickly and you will have technical support about automation program.



## Bolted Silos

Bolted silos are preferred due to its' compactness for transportation. It can be transported with containers for avoiding freight costs. Because of its modularity, Semix is able to manufacture bolted silos in a range between 100 to 2000 tons. Semix provides a mechanical supervisor for assembling the bolted silo correctly. Semix has succeeded to install bolted silos (which's capacities of more than 500 tons) in Peru, Israel, Germany, Dubai, and United Kingdom.



## EQUIPMENTS

1. PRESSURE RELIEF VALVE: **WAM**
2. BUTTERFLY VALVE: **WAM**
3. PNEUMATIC ACTUATOR: **WAM**
4. MICRO SWITCH: **WAM**
5. LEVEL INDICATOR: **WAM**
6. SAFETY VALVE: **WAM**
7. AIR JETS: **WAM**
8. FLAP: **WAM**
9. FILTER: **WAM**

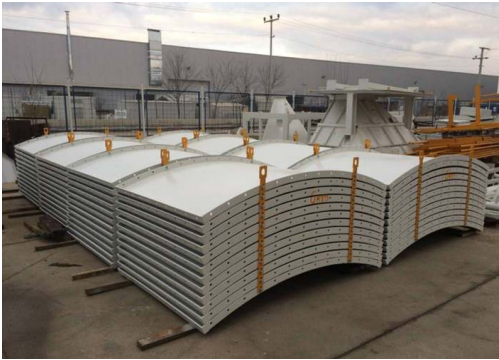
## SCREW CONVEYORS

2 Units of Screw Conveyors (Ø273 mm) will be assembled for discharging the cement.

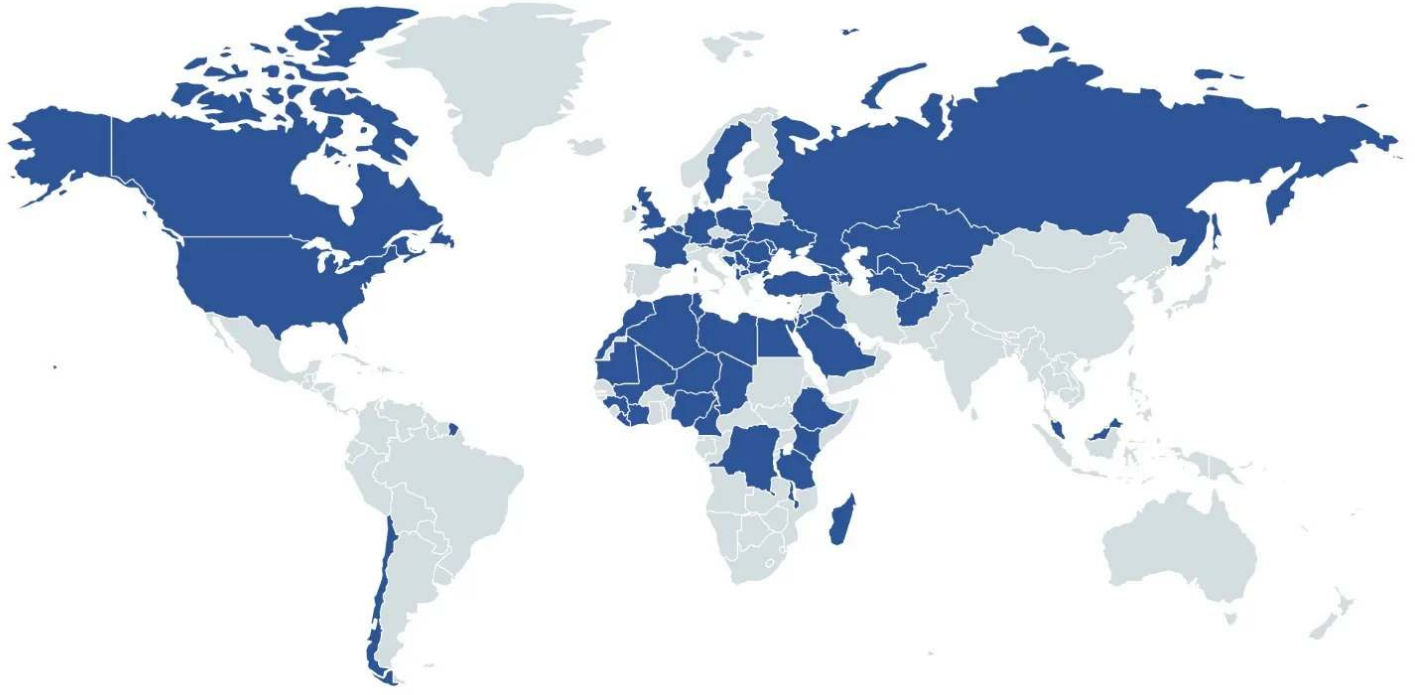




# Product Gallery



# References



HEIDELBERG  
CEMENT

STRABAG

LAFARGE



HYUNDAI

ASTALDI

clinotech

Limak

kalyon

CENGİZ  
İNŞAAT

KOLIN

KİPAŞ HOLDİNG

ONUR  
TAHHİT TAHHİMLİK İNŞAAT TİC. VE SAN. A.Ş.

DANIŞ BETON  
SİVİ İNŞAAT SAN. TİC. A.Ş.

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