



High Speed Container Mixers



***Born to Mix***

Mixing equipment  
for Plastics,  
Powder Coatings,  
Powders, Additives  
and Colors.



# Promixon: New Generation **Great Experience**



Our vocation is to manufacture high quality mixing plants that boost the performance parameters of user companies and meet the needs of our customers in full.

Our mission is to deliver tangible benefits to the

plastics and powder coatings industries.

Our speciality is our guarantee of fast and effective after-sales services.

Our attention is entirely focused on customer satisfaction, and that's the goal we pursue when we

build our mixing plants of the latest generation.



**Pro** from the latin “Prode”: Help, at defense, in favor in advantage

**Mix** english voice “to mix” = Misculare  
from the latin “Misculare”: Putting together different substances to obtain a unique homogeneous mass

**On** english voice turn on = Activate  
“Activate”: putting into action, making it effective, bring it to life.

Corporate values, expressed in logo, acts to **achieve results** beneficial to you, working with you, for you.



**SERIE** **FX**

High Speed  
Container  
Mixers

**MIXER** **FX**

The new FX series of container mixers provide the best alternative to conventional high speed mixers when production conditions require a high versatility and a wide range of different products to be mixed with the same mixer.

Thanks to the container mixer special design divided into two separate units, mixing head and portable container, the cleaning time between batches is minimized therefore the risk of contamination too when switching from one type of production to another.

Mix, storage and transportation are optimized by directly using the same containers that can be easily inserted in a dosing system either to e weighing scale or an extruder feeder.

TECHNICAL TABLE OF VARIOUS SIZES AVAILABLE				
Type FX	Total Volume Lt	Useful Volume Lt	Capacity Kg/batch	Motor Power kW
FX- 150	150	120	60	11
FX- 300	300	240	120	18,5
FX- 500	500	400	200	22
FX- 600	600	480	240	30
FX- 700	700	560	280	37
FX-1000	1000	800	400	45
FX-1200	1200	960	480	55
FX-1500	1500	1200	600	75
FX-2000	2000	1600	800	90

*Note: The data shown in the table are indicative and must be confirmed by PROMIXON.*



OUR STATE  
OF THE ART  
SOLUTIONS  
TO HELP YOU  
INCREASE  
PRODUCTIVITY





## APPLICATIONS

The containers are used in the mixer FX cold mixture of polymer powders or granules with pigments, fillers and additives in the following fields:

- Master-Batch of color pigments.
- Compound engineering plastics of all kinds.
- Powder Coating.
- Powders Pre-mixing of all kinds, even food applications.

INTEGRATED  
SOLUTIONS  
FOR STATE  
OF THE ART  
PROFESSIONAL  
MIXING



## ADVANTAGES AND HIGHLIGHTS OF **CONTAINER MIXER FX**

### Mixing, storage And transport container

Interchangeable and removable as equipped with trolley with wheels for moving, lifting with fork lift

pockets and hooks for lifting by hoist. Built entirely in stainless steel with surfaces in contact with the product mirror polished. Discharge by means of butterfly valve.

### Mixing tool

Designed to ensure intensive mixing in order to reduce the process time and ensure the perfect dispersion of the products even if heterogeneous.

Built in stainless steel with mirror polished surfaces in order to minimize deposits of material and thus optimize the cleaning time between batches. For a high versatility, PROMIXON

makes available a variety of configurations to meet different mixing requirements.







## ADVANTAGES AND HIGHLIGHTS OF **CONTAINER MIXER FX**

### **Mixing head**

Mixing chamber made of stainless steel for parts in contact with the material and entirely mirror polished surface for better cleaning. The wide range of

connection between the bottom and the vertical wall ensures the creation of the best mixing vortex enhancing the dispersion of the products.

### **Connecting the container to mixing head**

Carried out by Q.ty 2 electro-mechanical worm jacks and intrinsically safe, ensures maximum safety and performance

during the tipping phases. For this purpose, the mechanical jacks are selected with large service factors for a prolonged durability.



## MIXING SOLUTIONS

### **Standard tools**

A two-stage, both spinning in the same direction. The mixing intensity of the tool is controlled by the variable speed drive applied to the main motor.

The peripheral speed of the bottom blade does not exceed 15 m/sec.

### **Dispersion type mixing tools**

A two-stage, each driven by a transmission shaft independently controlled by the same motor and gear unit. The speed ratio between the bottom stage (slow) and the upper stage

(fast) of fluidization is 1/8: 120 rpm/960 rpm. This solution is particularly suitable in those applications where a high intensity mixing without heating the material is required.





### Twin-engine dispersion tools

A two-stage, each commanded by a transmission shaft independently controlled by independent motors. The speed ratio between the stage of the bottom

(slow) and the upper stage (fast) of fluidization is infinite. Possibility of reverse rotation of the top fluidizing blade for a counter-rotating effect to enhance the mixing intensity. This solution is particularly suitable in those applications

where a high flexibility combined with all kind of mixing intensity.

### Chopper tool

A further development is the use of a side chopper device for a perfect dispersion at low speed. Particularly suitable for applications with heterogeneous materials and different density and fluiditysmoothness.



### Metallic Bonding tools

A three-stage with cooling by the circulation of water to get cold surfaces and therefore minimize the deposit of pigments or powder coating on the surface. The geometry of the blade ensures the

formation of a optimal vortex without stagnation points and a transfer of energy to ensure a perfect homogeneous bonding.

### Multi-stage heating mixing tools

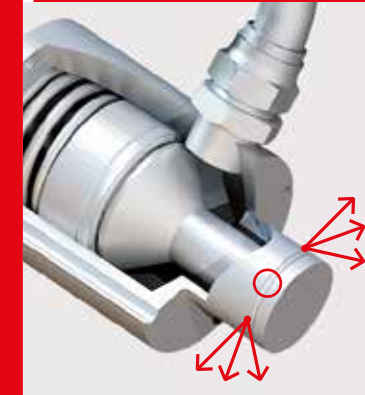
A three-stage for the highest level mixing intensity so as to heat the material by friction. Used for special applications such as the production of rigid or plasticized PVC Dry-Blend or Master-Batch

preheated. The geometry of the blade ensures the optimal vortex formation without stagnation points and a homogeneous energy transfer.





*In order to put the use in condition to get the maximum from the mixing plant it is often necessary to complete the supply with special accessories.*  
*Based on its own experience, PROMIXON is able to provide standard solutions or tailor designed for each production needs or safety.*



## MIXING SOLUTIONS

### Docking and discharge station

The docking and discharge station is for the dust-free emptying of the mixed material into a further processing equipment (such as a sieving unit or and extruder feeder).

The mixing containers are manually pushed into the station and locked in position by a pneumatic jack.

#### **The docking and discharge station consists of:**

- A guide fork metal frame with the container detect switch to activate

the pneumatic jack to lock the container in the exact position.

- Pneumatic actuated discharge flange to attach on the container butterfly valve. Circumferential seal made of EPDM rubber; neutral to avoid contamination and to ensure the dirt-free connection.

The down-pipe made of AISI 304 stainless steel with interior surfaces mirror polished. Inside the discharge down-pipe there is a sensor switch to control when the container is empty.

- A pneumatic box positioned on board of the station.

- The opening device to clamp with the container discharge valve for open/close operation (AUT/MAN).
- Electric vibrator to prevent the formation of the bridge of material in the container during the discharge phase.

## ACCESSORIES

### Liquid injection side valve

Applied to the mixing head for the injection of liquid directly on the mixing flow. In option the supply of the injection pump and storage tank oils.

### HMI

Touch panels are available in various sizes for a better view and interface with the operator. Remote control and reporting available.

### ATEX

For operation in various hazardous areas. ATEX-Zone 22, 21, 20. Using electrical and mechanical components intrinsically safe certified and marked for use in hazardous environments with risk of explosion.

### Inerting and Oxygen % control

For the use of materials at high risk of explosion. Oxygen analyzer sensor with long-lasting thermoparamagnetic technology.



## CONTROLS + HMI

### Solutions available

Our fully automatic electrical control cabinets are produced in-house and equipped with the very latest technology to ensure safe management of the mixing plant.

Our insistence on the use of internationally recognised brands of commercial components ensures ready availability and a worldwide after-sales service to ensure machine downtimes are kept to the absolute minimum.

All our electrical cabinets are equipped with inverters for management of turbomixer rpm and to allow the consequent flexibility and energy savings during use of the plant. PROMIXON supplies tailored solutions based on specific customer requirements. That's why

our expert software engineers developed the new user interface panels equipped with a S.C.A.D.A system, which makes the collection of production performance data and statistics even faster and more accurate.

### Online Support

PFacility to set up remote assistance services. This system can be provided for the plant PLC and HMI for diagnostics, upgrades and troubleshooting.

## SOFTWARE

From the easier system to the more sophisticated mixing plants, PROMIXON studies and implements the management software to provide the following advantages:

- Easy to use.
- Troubleshooting operational, providing instructions to the operator.
- Manuals on the HMI panel.
- Reporting the plant status: productivity, batch/hr performed, alarms.
- Charts.
- Setting in steps of mixing formulas: time, speed, temperatures, security.

QUALITY  
RELIABILITY  
READY  
ACTION  
ENERGY  
SAVING





**PROMIXON** S.r.l. - Società a Socio Unico

Via A. Manzoni, 18/D - 20020 MAGNAGO (MI) - Italy - Tel. +39 0331 307122 - Fax: +39 0331 309797  
info@promixon.com - www.promixon.com