

Packaging Solutions For Feed Premix

CONCETTI BY NUMBERS

- Established in **1975** – Family-owned activity since 1918
- Capital: 1,352 Million Euros
- Yearly group turnover: **25 million Euros**
- Employees: **155** (+ 54 subcontractors)
Among them:
 - 25 electronic / mechanical engineers
 - 7 engineers dedicated to the technical documentation
 - 40 specialized technicians for assembly and technical assistance
- Group premises: in Bastia Umbra, Italy. 11,200 sqm covered surface (factory 8.800 sqm, offices 2.400 sqm)
- More than **1570 lines** installed in **47 countries**
- 25 sales representatives worldwide





PREMIX PLANTS

- Premix packing is among the most technically challenging
- Usually a wide range of products/weights but limited bag sizes.
- Difficult materials – fine powders some flushy, some not.
- Short job runs.
- Huge product range 2000+
- Cross contamination issues to be addressed.
- Bags vary considerably making auto palletising difficult.

Concetti have learned to overcome these issues through many years of experience



CONCETTI EXPERIENCE IN PREMIXES

- First installation in 1979.
- Installations in :
 - Italy, UK, USA, Spain, Russia, Germany, Austria, Switzerland, Greece, Thailand, Denmark, Korea, Holland.
- 70 plants in total.
- 18 installations worldwide for DSM.
- PREMIER NUTRITION ordered 2 lines in the UK in 2011.
- Reference list below.

REFERENCES

COUNTRY	CUSTOMER	YEAR	WEIGHER	FILLER	PALLETISER
ALGERIA	GIZA	1979	WEIGHER	SEMI AUTO	
ITALY	RECODI TECHNOLOGY	1980	WEIGHER	CLOS. LINE	
ITALY	SIVAM	1980	WEIGHER	SEMI AUTO	
ITALY	FARMACEUTICI GELLINI	1983	WEIGHER	SEMI AUTO	
ALGERIA	GIZA	1983	WEIGHER	SEMI AUTO	
ITALY	I.C.C.	1983	WEIGHER	CLOS. LINE	
ITALY	BIOLCHIM	1984	WEIGHER	CLOS. LINE	
HOLLAND	DOW CHEMICAL	1984			
ITALY	LA VETERINARIA	1985	WEIGHER	SEMI AUTO	
GERMANY	CELANESE - HOECHST	1986	WEIGHER	SEMI AUTO	PS-3A/10S
ALGERIA	GIZA	1986	WEIGHER	SEMI AUTO	
DENMARK	VITFOSS	1986	WEIGHER	SEMI AUTO	
GERMANY	BOSCH TIERNAHNRUNG	1987	WEIGHER	SEMI AUTO	PS-3A/10S
ITALY	IZA	1987	WEIGHER	CLOS. LINE	
DENMARK	SUPERFOSS	1987	WEIGHER	SEMI AUTO	
ITALY	BIOLCHIM	1988	WEIGHER	CLOS. LINE	
ITALY	DSM N.P. - ISTITUTO VITAMINE	1988	WEIGHER	SEMI AUTO	
ITALY	FARMACEUTICI GELLINI	1988			PS-3A/10S
ITALY	COPALFARM	1989	WEIGHER	SEMI AUTO	

REFERENCES

COUNTRY	CUSTOMER	YEAR	WEIGHER	FILLER	PALLETISER
AUSTRIA	KREMS KEMIE	1989		CLOS. LINE	
ITALY	NUTRECO EUROFARMA	1989	WEIGHER	SEMI AUTO	
ITALY	BAYER	1990	WEIGHER	SEMI AUTO	
ITALY	DSM N.P. - ISTITUTO VITAMINE	1990	WEIGHER	SEMI AUTO	
ITALY	SIVAM	1990	WEIGHER	SEMI AUTO	PS-3A/10S
ITALY	ORGANAZOTO	1991			PS-AB
ITALY	IZA	1992	WEIGHER	CLOS. LINE	
ITALY	NUTRECO EUROFARMA	1992	WEIGHER	SEMI AUTO	
ITALY	CRIPPSAR ITALIANA	1993		SEMI AUTO	
ITALY	DSM N.P. - ISTITUTO VITAMINE	1993	NET/CC	IGF-900	PS-3A/10S
ITALY	BIOLCHIM	1994		CLOS. LINE	
AUSTRIA	BIOMIN INTERPREMIX	1994			PS-3A/10S
SINGAPORE	COMPUTER MEASUREMENT	1994		SEMI AUTO	
GREECE	DSM NUTRITIONAL PRODUCTS - HELLAS	1994	GROSS/CC	IGF-600	
ITALY	FILOZOO	1994		CLOS. LINE	
ITALY	LA VETERINARIA	1994	GROSS/CC	IGF-600	
SWITZERLAND	VITAL	1994		SEMI AUTO	
UK	DSM NUTRITIONAL PRODUCTS UK	1995	NET/CC	IGF-600	PS-3A/10S
UK	DSM NUTRITIONAL PRODUCTS UK	1995	2xNET/CC	IGF-900	PS-3A/10S

REFERENCES

COUNTRY	CUSTOMER	YEAR	WEIGHER	FILLER	PALLETISER
ITALY	GRANDA ZOOTECNICI	1995	WEIGHER	SEMI AUTO	
AUSTRIA	WOV	1995			PS-3A/10S
ITALY	CRIPPSAR ITALIANA	1996	WEIGHER		
SWITZERLAND	UFAG AG	1996		SEMI AUTO	
ITALY	METHODO CHEMICALS	1997	WEIGHER	SEMI AUTO	
ITALY	ADICA	1998	WEIGHER	SEMI AUTO	
ITALY	METHODO CHEMICALS	1998			PS-3A/10S
ITALY	BASF ITALIANA	1999			PS-3A/10S
ITALY	BASF ITALIANA	1999	WEIGHER	SEMI AUTO	PS-3A/10S
ITALY	DSM N.P. - ISTITUTO VITAMINE	1999			PS-3A/10S
ITALY	NUTRECO TROW ITALIA	1999		IGF 600	PS-4A/7S
ITALY	INVE ITALIA	2000	GROSS/CC	IGF 600	
SPAIN	DSM NUTRITIONAL PRODUCTS IBERIA	2001	2xNET/CC	IGF-900	
ITALY	ZOOLIFE	2001	GROSS/CC	IGF 600	
SOUTH KOREA	DSM NUTRITIONAL PRODUCTS - KOREA	2002	MNET/CC	IGF 600	
THAILAND	DSM NUTRITIONAL PRODUCTS - ROVITHAI	2003	MNET/CC	SEMI AUTO	
THAILAND	DSM NUTRITIONAL PRODUCTS - ROVITHAI	2003	MNET/CC	IGF-600	
ITALY	SIVAM	2003	GROSS/N	SEMI AUTO	
ITALY	DOX-AL ITALIA	2004	GROSS/CC	IGF-600	PS-4A/7S



REFERENCES

COUNTRY	CUSTOMER	YEAR	WEIGHER	FILLER	PALLETISER
ITALY	PALL FILTRATION & SEPARATION	2005	GROSS/C	IGF-300	
AUSTRIA	RWA UNSER LAGERHAUS	2007	GROSS/N	IGF-600	
SWITZERLAND	VITAL	2007	GROSS/N	IGF-600	PS-4A/7S
SPAIN	DSM NUTRITIONAL PRODUCTS IBERIA	2009	MNET/CC	IGF-600	
SPAIN	DSM NUTRITIONAL PRODUCTS IBERIA	2010	MNET/CC	IGF-600	
RUSSIA	DSM NUTRITIONAL PRODUCTS RUSSIA	2010	NET/CC	IGF-600	
RUSSIA	DSM NUTRITIONAL PRODUCTS RUSSIA	2010	NET/CC	IGF-600	
USA	DSM NUTRITIONAL PRODUCTS USA	2010	NET/CC	IGF-600	
GREECE	DSM NUTRITIONAL PRODUCTS - HELLAS	2010	GROSS/CC	IGF-600	
ITALY	METHODO CHEMICALS	2010	NET/CC	IGF-600	PS-4A/8S-C
SWITZERLAND	MULTIFORSA AG	2010	GROSS/G	IGF-600	
ITALY	MAZZOLENI PRODOTTI ZOOTECNICI S.p.A.	2011	NET/CC	IGF-600	PS-3A/10S-4S
UK	PREMIER NUTRITION	2011	NET/CC	IGF900	PS-4A/15S
UK	PREMIER NUTRITION	2011	NET/CC	IGF900	PS-4A/15S



HOW CONCETTI WORK

Concetti design and develop distinctive and innovative machines and...



...Concetti fabricate, machine, weld, paint and assemble to make...



Laser cutter

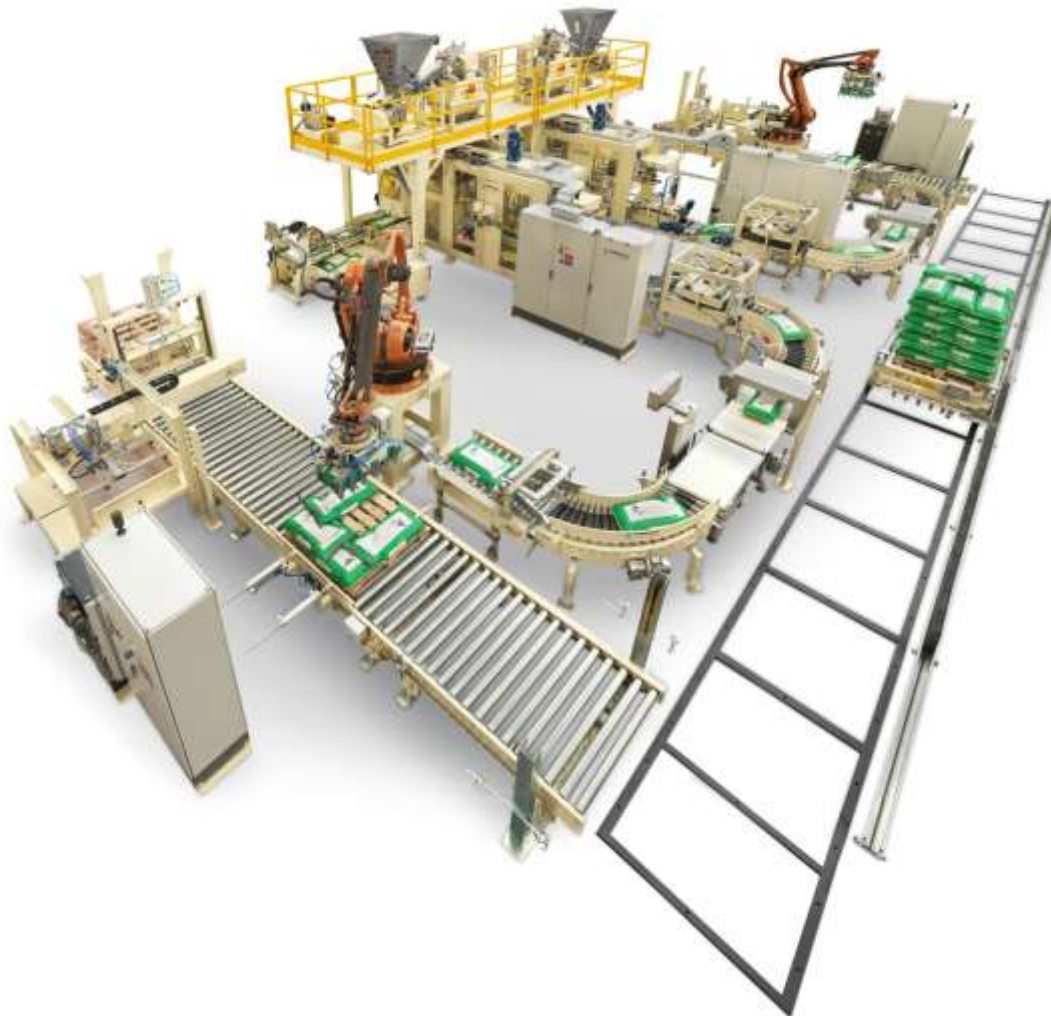


Painting shop



Welding shop

...COMPLETE LINES



And because Concetti make complete lines it is possible to assemble and test the whole system on the customer's own materials, bags, film reels and pallets to make sure everything is perfect before despatch.

Special features -QUICK CLEANOUT

•Premix products require **SCREW** feeding - no other feed device will give the flushing prevention or fine weight control needed But the devices need to be cleaned out between products and this needs to be done quickly to minimise downtime and increase productivity.

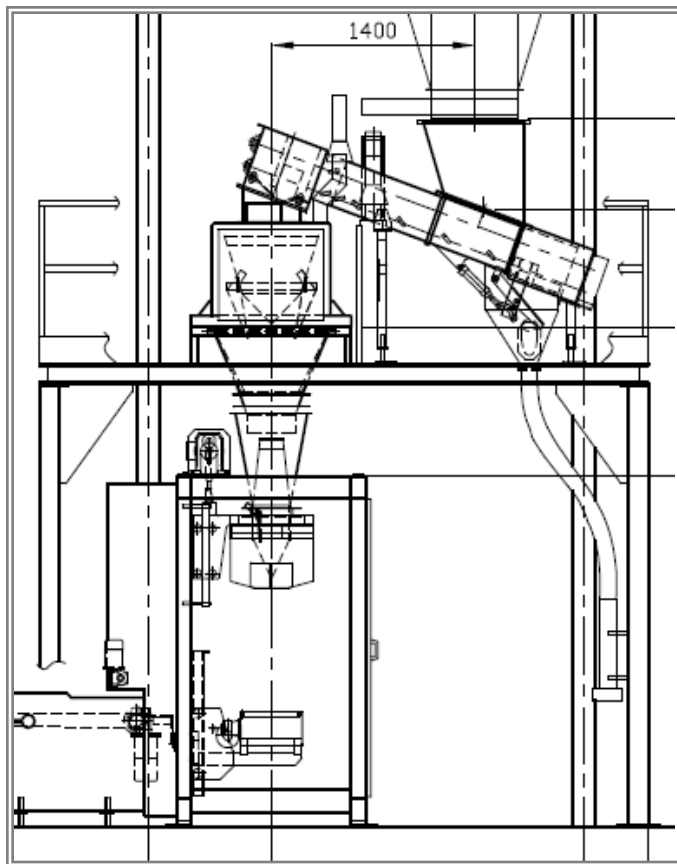


- Concetti use over/under inclined screws with a special system to allow quick cleaning (as shown on the left)
- Other suppliers use horizontal side by side screws with cleanout doors which require the operator to get access to the upper platform and can be time consuming as well as dusty/dirty.



Special features -**QUICK CLEANOUT**

• **The cleanout is done via an automatic programme** with residue emptied at ground level (see typical drawing on left).



• **The rear door opens first, then the screws turn in reverse.**

• **After a time delay air jets clean the screw as it rotates** The air cleaning time is adjustable.

• **After the screw is cleaned, more air jets clean the rear door** Again the cleaning time is adjustable.

• **At the end the rear door is closed and the system is ready to receive a new, different product.**



Special features -QUICK CHANGE

- **Setting up an automatic packing line can take time.** There are many parameters to change. For complete lines Concetti always propose linking the line so that changing a programme for the bag filler also **automatically** changes:
 - The target weight for the weigher.
 - The screw feeder speed.
 - The IGF machine for bag length, width, etc.
 - The checkweigher target weight.
 - The bag press (flattener) position (if fitted).
 - Bag centralising for the robot.
 - The robot palletiser layer pattern.
- **On Concetti systems all these changes are made AUTOMATICALLY from the IGF panel.** There is no walking between devices to set the separate parameters and no handwheel adjustments (except for pallet size adjustment GKN to EURO width) and no risk of set-up errors.



HOW DOES THE QUICK CHANGE WORK?

- **The IGF** has servo motors to adjust the sealing conveyor height, the bag magazine back stop, the bag width centralising, etc.
- **The bag press** (where fitted) has a servo motor to adjust the compression for different bags.
- **The checkweigher and stretch wrapper can** have serial communication cards to allow remote programme selection.
- **All these devices** (plus inverters and other items) are connected by a **Profibus network** and a **relational database**. When the IGF programme is changed the other devices also change.
- **This system also allows remote programme selection AND modem teleservice of ALL the connected devices via one analogue or broadband line.**
- *If this set up operation is manual the time taken will be dependent on the operator and more difficult for the company to control – Also the risk of errors in setting up (e.g. wrong checkweigher target) is hugely increased.*





WHAT'S INCLUDED ON BAG FILLING?

- **IGF 900 bag filling and closing by sewing with crepe tape, for 600-650 bags/hr/line**



- **The culmination of 35 years experience in bag filling and closing.**
- **Positive gripping of the bag throughout the filling and closing cycle.**

WHAT'S INCLUDED ON BAG FILLING?

- Handling **GUSSETED** bags with gusset reforming on-the-bag-spout.
- Thermal transfer printer to print onto the empty bag before filling, label size 150mm x 200mm. No need to pre label bags.
- Handling **PAPER** and **PE** bags.
- **Thread break alarm** to alert the operator when the sewing thread is broken.
- **End of crepe tape alarm** to alert the operator when the crepe tape roll has run out



WHAT'S INCLUDED ON BAG FILLING?

- **Checkweigher from Mettler Toledo.**

The leading European Manufacturer.





WHAT'S INCLUDED ON PALLETISING?

- **Four Column Robots** Concetti PS3 with top and side compression for the best in stacking.

- **PE bottom sheet dispenser from a reel** Automatic selectable depositing of PE bottom sheets onto the empty pallet.

- **Pallet dispenser for Euro or GKN pallets** Adjustable by handwheel. Not both at the same time.



- **Motorized roller conveyor** to convey automatically the full pallets from the palletiser units to the wrapping machine.



WHAT'S INCLUDED ON PALLET WRAPPING?

- **Rotating arm machine from Technowrapp** CONCETTI work frequently with Technowrapp. Rotating arm machine means the pallet does **not rotate**. The film carriage moves around the **static pallet so no risk of bags falling off**.
- **Top sheet dispenser** Automatically dispenses a top sheet **mid cycle** for splash proof wrapping.
- **Power pre-stretch for minimum film cost and maximum security.** The Technowrapp film carriage has up to 300% pre-stretch to give the **lowest possible wrap cost**.
- **Film tail sealing.** The film tail is **sealed against the wrap** to prevent the wrap unwinding.



FACTORY TESTING

- **Individual machines are assembled and tested** CONCETTI have an integrated factory where parts are fabricated, painted, assembled and tested so the whole operation is under CONCETTI's careful control.
- **The complete line will be assembled for FAT** CONCETTI erect the complete bag filling, closing and palletising line and, using the clients own product, bags, pallets, etc, test the line fully before factory acceptance.
- **This testing means a quick start-up on site without any of the usual delays.** Users witnesses these tests and any queries about operation or installation can be answered and modifications made if necessary before shipment.
Think of it as a trial installation and commissioning but...
This is only practical if all the machines are made at the same facility

FINALLY...



Meticulous attention to detail doesn't cost you - it pays you!

Bag Filling, Closing and Palletising Systems

A good packing line will last for 20 years or more -
why compromise?