

COMECTM

Avantgarde Engineering



INNOVATION

4.0

EQUIPMENT & PROCESSES

RED LINE



TRUSTED SINCE 1970

2020

2020

Established in 1970, COMEC is known worldwide as one of the most reliable and innovative leaders in the field of automated equipments and solutions for paint, coatings, chemical industry, cosmetics, food and pharmaceutical, headquartered in Canossa, Italy and operating globally.

For 50 years COMEC has provided customers with premium, innovation-based solutions for Dispersing, Milling and Raw Material handling.

COMEC celebrates its 50 years of Avantgarde Engineering by RED PASSION logo. RED is the symbol of success of the Italian industry in the World.

After Half a Century we have traced our own RED LINE to shape an endless journey to our main goal: EXCELLENCE.

50 YEARS of
AVANTGARDE
ENGINEERING

SMART SOLUTIONS

4.0



DISPERSING, MILLING & MIXING

4.0 INDUSTRY

- TOTAL CONTROL OF THE PLANT
- RECIPES MANAGEMENT
- MAINTENANCE LIBRARY
- STATE OF THE ART HMI SOLUTIONS FIT TO 4.0 INDUSTRY
- OEE (OVERALL EQUIPMENT EFFECTIVENESS) INDICATORS
- PREVENTIVE MAINTENANCE INDICATORS
- LOW FOOTPRINT AND COMPACT LAYOUT
- TOTAL INTEGRATION WITH CUSTOMER'S ERP
- BATCH COMPARISON

DYNAMIX

4.0 PREDICTIVE MAINTENANCE

MOBILE VESSEL DISPERSERS

DYNAMIX dispersers are designed to operate in industrial critical conditions thanks to their quality. They are the best choice if you need reliability, efficiency and top quality/price level. Special design top cover for easy maintenance. Complete family range: for every need from 2,2 kW to 132 kW, from single high speed shaft to double shaft.

DYNAMIX DC



APPLICATIONS

Paints, plastic coatings, sealants, cosmetics, epoxy products, inks, adhesives

VISCOSITY

From 1.000 Cp up to 300.000 Cp

DRIVING POWER

From 2,2 Kw up to 132 Kw

BATCH USABLE VOLUME

From 25 lt up to 3.000 lt

DYNAMIX DCL



APPLICATIONS

Paints, plastic coatings, sealants, adhesives, wall fillers

VISCOSITY

From 50.000 Cp up to 1.000.000 Cp

DRIVING POWER

From 2,2 Kw up to 132 Kw

BATCH USABLE VOLUME

From 25 lt up to 2.000 lt

DYNAMIX DCLV



APPLICATIONS

Paints, plastic coatings, sealants, adhesives, wall fillers, plasters, mastics

VISCOSITY

From 50.000 Cp up to 1.000.000 Cp

DRIVING POWER

From 2,2 Kw up to 132 Kw

BATCH USABLE VOLUME

From 25 lt up to 2.000 lt



ADVANTAGES

- 50 years experience design, production and installation: thousands dispersers on field
- Industry 4.0 ready (PLC inside, operator graphical interface, Ethernet connection)
- State of the art software (intuitive touch interface, process KPI, predictive maintenance, cockpits panel)
- High efficiency V-belt HI-power transmission (with self-tensioning up to 37 kW)
- Long-life best in class components
- Durable chassis due to stiffness-driven engineering instead of resistance-driven engineering
- Soft speed regulation and peak power resistance due to top-brands frequency converter

FEATURES

- Scrapers
- Adjustable working height / up and down movement while mixing
- Under vacuum execution, pump and accessories
- Over-pressure execution and accessories
- 3 solutions tank locking system (adjustable belt, fast clamping, double centering arm)
- Turbo impeller (Dynamicx DC)
- Butterfly impeller (Dynamix DCL)
- Butterfly and cowless impeller (Dynamix DCLV)
- Product temperature sensor integrated inside shaft
- Tele-assistance
- Customer ERP software interface
- Wi-fi operator control panel
- Servo-ventilated motor for forced cooling
- Cleaning spray balls
- Weighing platform system integrated
- Atex version

DYNAMIX

4.0 PREDICTIVE MAINTENANCE

STATIONERY DISPERSERS

DYNAMIX fixed tank dispersers are designed to operate in industrial critical conditions thanks to their quality. They are the best choice if you need reliability, efficiency and top quality/price level.

DYNAMIX
MD
SINGLE SHAFT



APPLICATIONS

Paints, plastic coatings, sealants, cosmetics, epoxy products, inks, adhesives

VISCOSITY

From 1.000 Cp up to 200.000 Cp

DRIVING POWER

From 2,2 Kw up to 250 Kw

BATCH USABLE VOLUME

From 800 lt up to 13.000 lt

DYNAMIX
MD2
DOUBLE SHAFT



APPLICATIONS

Thick coatings, wall stuccoes, sealants, adhesives, plastics

VISCOSITY

From 40.000 Cp up to 310.000 Cp

DRIVING POWER

From 37 Kw up to 250 Kw

BATCH USABLE VOLUME

From 1.200 lt up to 13.000 lt

DYNAMIX
MD3
TRIPLE SHAFT



APPLICATIONS

Thick coatings, mastics, wall stuccoes, sealants, adhesives, plastics

VISCOSITY

From 40.000 Cp up to 310.000 Cp

DRIVING POWER

From 37 Kw up to 250 Kw

BATCH USABLE VOLUME

From 1.200 lt up to 13.000 lt



ADVANTAGES

- 50 years experience design, production and installation: hundreds MD dispersers on field
- Industry 4.0 ready (PLC inside, operator graphical interface, Ethernet connection)
- State of the art software (intuitive touch interface, process KPI, predictive maintenance, cockpits panel)
- Long-life best in class components
- Extra-strong chassis due to stiffness-driven engineering instead of resistance-driven engineering
- Soft speed regulation and peak power resistance due to top-brands frequency converter

FEATURES

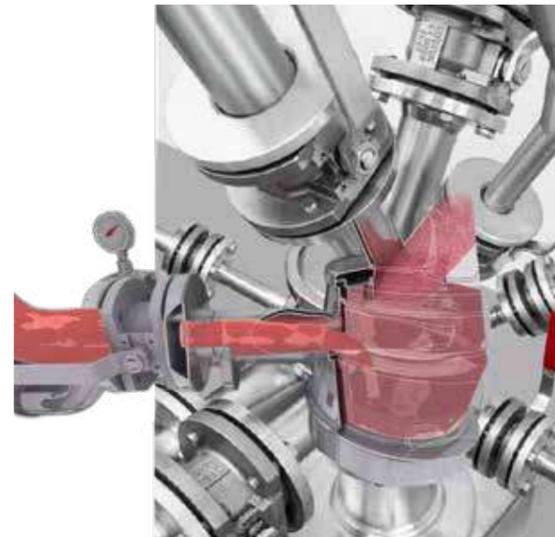
- Double arm motorized scrapers
- Load cells
- Adjustable working height / up and down movement while mixing
- Under vacuum execution, pump and accessories
- Over-pressure execution and accessories
- Turbo impeller
- Product temperature sensor
- Tele-assistance
- Customer ERP software interface
- Wi-fi operator control panel
- Servo-ventilated motor for forced cooling
- Cleaning spray ball / Cleaning head on automatic lifting system
- Two high speed impeller with different combination of geometries (TRIPLE SHAFT)
- Central anchor scraper with adjustable blades in teflon (TRIPLE SHAFT)
- Atex version

KYNESIS

4.0 PREDICTIVE MAINTENANCE

HIGH-TECH DISPERSING

Kynesis is an high-tech dispersing equipment. As continuous in-line disperser working on rotor-stator principle Kynesis is suitable in a large range of applications and also re-vamping of existing processes. It offers an easy integration either in process for homogeneous distribution of solid particles in liquid (dispersion), either liquid in liquid (emulsions). Kynesis is developed during last decade to evolve 50 years Comec experience in traditional dispersers to competitive needs of today's industry.



ADVANTAGES

- High **flexibility** and **versatility** to cover a wide range of products, viscosities and densities thanks to different possible configuration with a unique machine
- Outstanding powder induction rate
- Industry 4.0 ready (PLC inside, operator graphical interface, Ethernet connection)
- State of the art software (intuitive touch interface, process KPI, predictive maintenance, cockpits panel)
- 40% - 70% energy saving compared to a traditional disperser.
- No Dust
- Immediate dispersion during powder induction
- Easy cleaning of the dispersing chamber and reduced dead-time between different batches
- Up to 90% cleaning agent reduction compared to a traditional disperser
- Scalability of results from one model to another in Kynesis family

FEATURES

- Speed regulation by frequency converter
- Mechanical seal auto-lubricated highest level on the market
- Wide range of rotors and stators managing wide range of products (different viscosities, density, dispersion finess, etc.)
- Components in contact with the product made of AISI 316, the rest AISI 304
- High wear resistance treatments inside the process-chamber
- Controlling sensors (chamber temperature sensor, flow sensor, etc.)

MODEL	POWER [kW]	MAXIMUM RPM	WIDTH (mm)	HEIGHT (mm)	DEPTH (mm)
KYNESIS 22	22	3000	800	1200	1400
KYNESIS 45	45	3000	800	1200	1400
KYNESIS 90	90	3000	1000	1500	1600
KYNESIS 132	132	3000	1000	1500	1600
KYNESIS 200	200	3000	1200	1700	2000

Powder induction rate (kg/min)				
Type of powder	132 kW	45 kW	22 kW	7,5 kW
Calcium carbonate	450-650	340-490	310-450	10-15
Titanium	350-600	260-450	240-400	8-16
Alluminium Silicate	250-400	190-300	175-270	7-10
Fillers, Extenders, talc	300-500	225-375	210-340	4-9
Light Pigments, Kaolin	120-300	90-225	80-200	4-9
Bentone	20-80	15-60	14-55	3-5
Silica, Aerosil	10-40	7-30	6-28	1-2



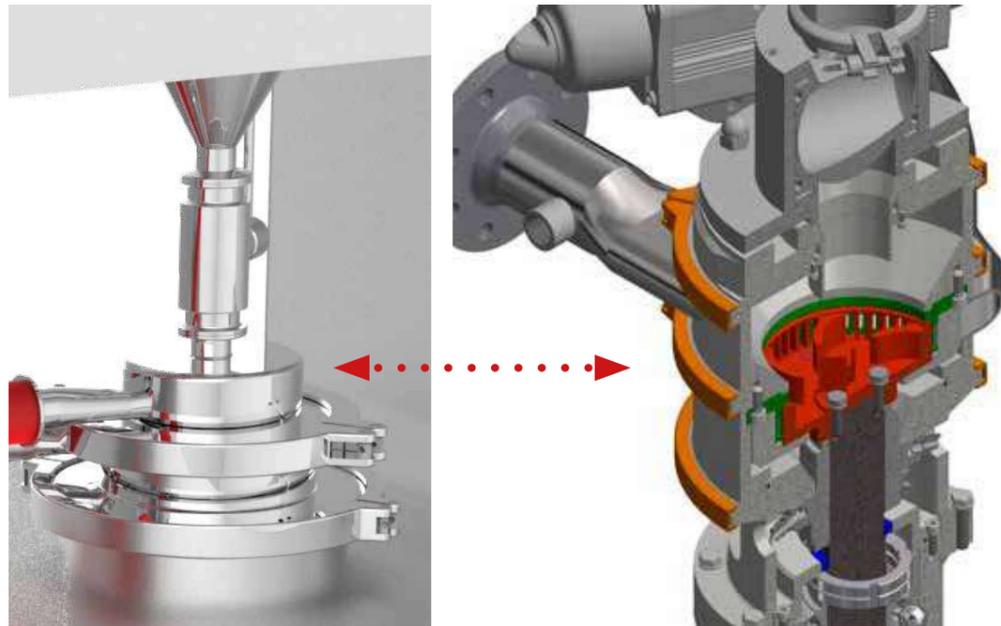
KYNEPILOT

4.0 PREDICTIVE MAINTENANCE

IN-LINE LAB & SMALL BATCHES DISPERSER

Kynepilot has dedicated process tank with integrated mixer for resins and liquid components, a small hopper for powder feeding, the necessary measuring equipment, internal piping, valves, pneumatic equipment and electronic control system.

The core part of the system consists of a powder wetting and dispersing unit that has been developed by revolutionizing the traditional Rotor/Stator principles.



RECIPE SCALE-UP FROM TANKS TO MECHANICAL LINEARITY

IN-HOUSE TESTING & TRIAL

COMEC offers technical Know-How and years of experience to ensure compatibility of your products with our equipments. Our In-house production trials include:

- Analysis of Client's products
- Process control functionality
- Operational tests on pilot machines
- Final check and result analysis



ADVANTAGES

- Electronic speed variation with frequency converter
- High flexibility and versatility to cover a wide range of products, viscosities and densities
- Process scalability
- Common database between Lab unit Kynepilot and Production unit Kynesis

FEATURES

- Small foot print and movable skid with integrated electric board
- From R&D to production
- Small batch production
- Innovative and user-friendly HMI
- Easy cleaning of the dispersing chamber and pipes
- AISI 316 pipes with clamp connections
- 7 to 25 l batches
- Recirculation tank equipped with cooling jacket, temperature control and stirrer



DUAL FORCE

4.0 PREDICTIVE MAINTENANCE

DOUBLE WORKING POWER BASKET MILL

DUAL FORCE submersible basket-mill is an outstanding ultra-fine and energy-efficient grinding machine for batch-type milling process. This unique system is designed taking advantage from the double force: separate drives for grinding and mixing. The special design allows to optimize product circulation inside the vessel taking care of different flow behaviour without changing the grinding maximum allowed speed.

SEPARATE DRIVES
FOR GRINDING &
MIXING

ENERGY-EFFICIENT
GRINDING
MACHINE

PORTABLE TABLET
4.0



ADVANTAGES

- Big batches with less motor power (1000 L with 30 kW)
- Processing wide range of product viscosities
- Milling time reduced up to 50%
- Narrow particle size distribution
- Higher grinding power with 70% less microbeads
- Cleaning time reduced by 60% (less than 5 minutes on most products)
- Energy saving up to 40%

FEATURES

- Double Force: separate drives for grinding and mixing
- Electronic speed variation with frequency converter main milling shaft
- Electronic speed variation with frequency converter mixing side shafts
- Hydraulic head lifting
- Wear resistant grinding chamber
- Efficient cooling jacket and no hot spots
- Clean assembly, easy maintenance and inspection
- Strong and washable covers to protect inner parts
- State of the art electrical and software equipment (temperature check, PLC architecture, Industry 4.0 ready)
- Full range of accessories (ATEX or SAFE AREA version, remotable operator interface on tablet, software upgrade to save production data, teleservice)

MODEL	MAXIMUM BATCH (standard vessel) (Liters)	MILLING MOTOR (kW)	MIXING MOTOR (kW)	BASKET SIZE (Liters)	MICROBEADS CHARGE VOLUME (Liters)	WIDTH (mm)	HEIGHT (mm)	DEPTH (mm)
DUAL FORCE 500	500	15	5,5	15	10,5	1000	1800-2700	2050
DUAL FORCE 1000	1000	22	7,5	30	21	1200	2700-3950	2700
DUAL FORCE 1500	1500	37	10	50	35	1500	2900-4150	3000

DUAL FORCE LAB

IN-LAB MILLING

4.0 PREDICTIVE MAINTENANCE

ADVANTAGES

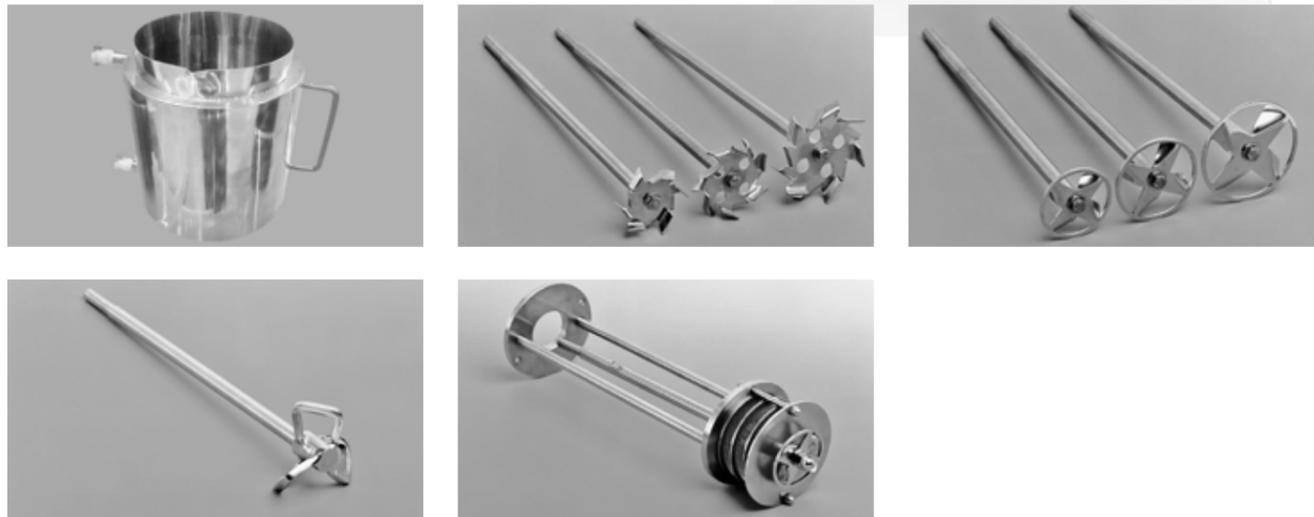
- Improving all the processes in saving time (up to 40%)
- New generation of HMI and control system (connectivity oriented)
- New concept for simple and intuitive use
- New design operator safety oriented (people lab)

FEATURES

- Machine Range deployed in 2 different sizes:
 - Size 1: Installed Power: 1.5 kW for the main laboratory task;
 - Size 2: Installed Power: 2.0 kW for the stronger applications (DualForce system dedicated)
- Main machine features:
 - Batch sizes: from 1 Lt to 5 Lt; new revolutionary fixing system
 - Working Tools: Milling, Dispersing, Agitating, Super-Milling (with DualForce system dedicated)



ACCESSORIES



Eco-WASHING

CLEANING SYSTEM

4.0 PREDICTIVE MAINTENANCE

ADVANTAGES

- Improving whole cleaning process and saving time and washing fluids (up to 50%)
- New generation of HMI and control system (connectivity oriented)

FEATURES

- Machine Range deployed in 3 different models:
 - Basic System: with 2-Axis Rotating washing head
 - Elicoidal System: with a revolutionary elicoidal trajectory system (patented by Dromont)
 - Brushed System: with washing head combined to rotating brushes system
- Machine Range deployed in 2 different versions:
 - Standard, for Water
 - ATEX, for Solvents
 - Target Batch: from 700 Lt to 1500 Lt

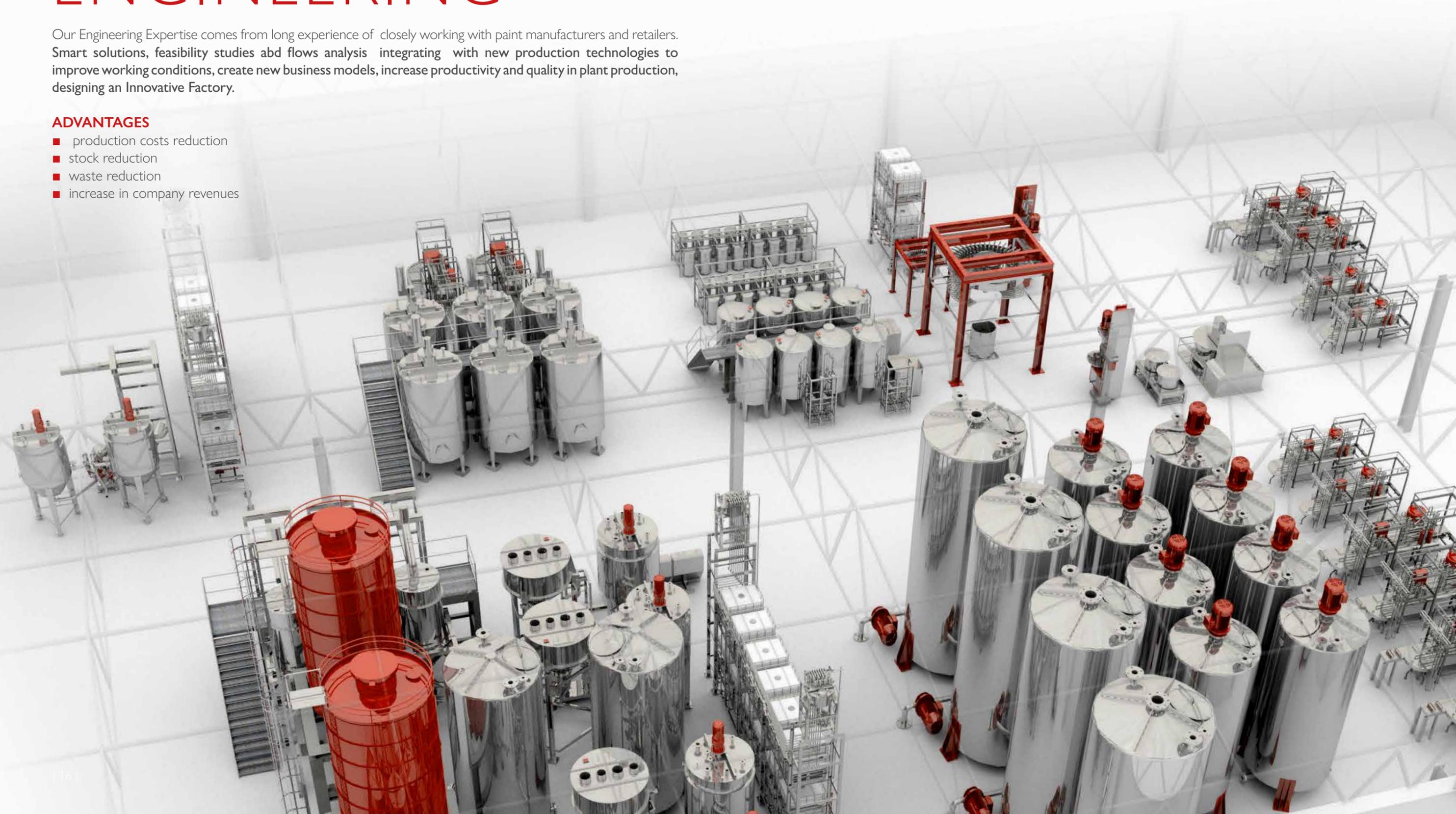


QONCEPT ENGINEERING

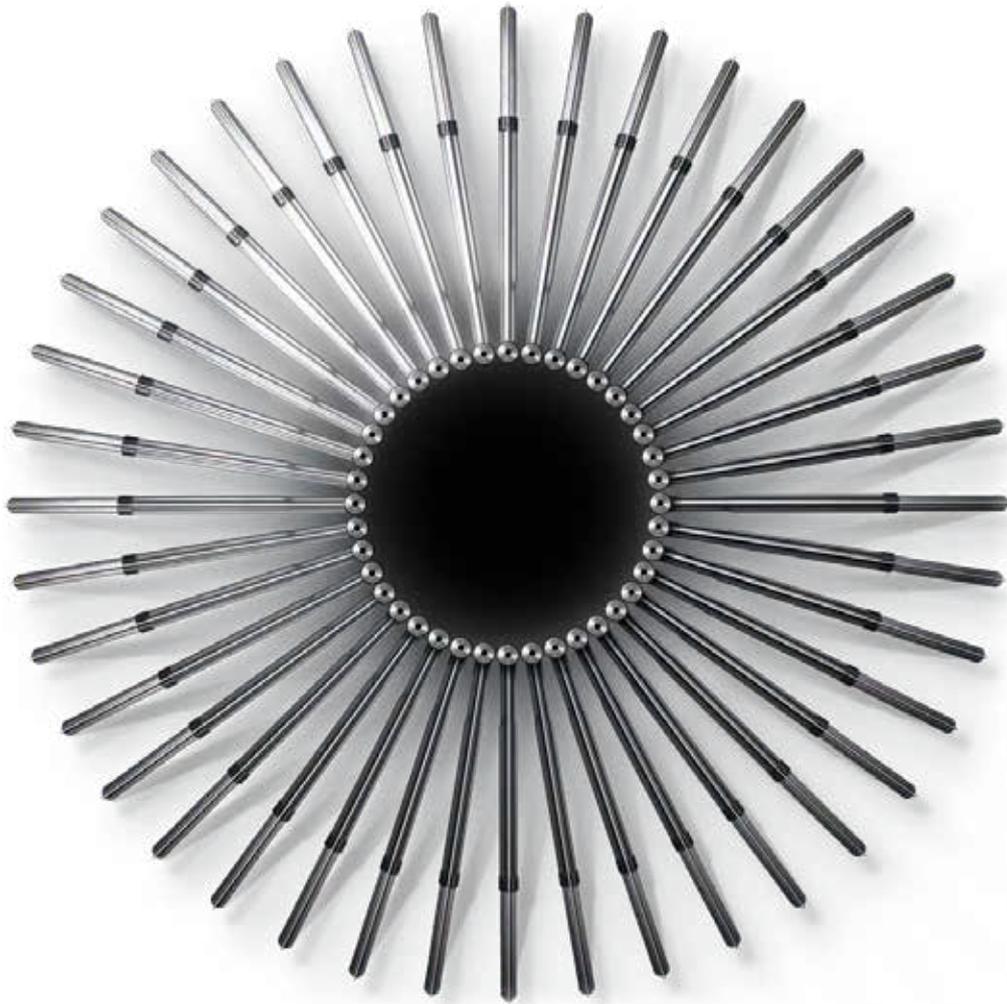
Our Engineering Expertise comes from long experience of closely working with paint manufacturers and retailers. Smart solutions, feasibility studies and flows analysis integrating with new production technologies to improve working conditions, create new business models, increase productivity and quality in plant production, designing an Innovative Factory.

ADVANTAGES

- production costs reduction
- stock reduction
- waste reduction
- increase in company revenues







COMECTM
Avantgarde Engineering

comec.eu.com

Comec s.r.l

Via Consolini, 12
42026 Canossa (RE)
Italy

T +39 0522 87 81 59
commerciale@comecsrl.it

Tech Support
T +39 0522 24 24 42
service@comec.eu.com

ITALY POLAND USA JAPAN CHINA

