





ALL AROUND
YOUR SHAPE

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0. Introduction

PET Solutions is a company of the Pegaso Industries SPA group with more than 25 years of history, and an international leader in the field of plastic processing machinery. The company offers a wide range of products for the dehumidification, drying, storage, feeding and transport of plastics. Each product series offers a wide range of products that differ from one another in terms of size, power and footprint.

This, coupled with the production versatility and flexibility that have always characterised the company, makes it possible for the company to adapt to the diverse requirements, types and applications requested by the customer.

The added value offered by the PET Solutions consists in the design, development, construction and sale of products and systems tailored to the customer's needs, offering a turnkey service that also includes after-sales support. The company has always been at the forefront of innovation and holds over 20 patents for components developed during the years thanks to constant investments and the constant growth of the engineering team that take part of Engineering and Research & Development departments.

PET Solutions' expansion in its twenty years of life took place in Italy, but also in Brazil and China, with its production plants and business offices, and in the United States and Russia with a business subsidiaries whose main goal is the satisfaction of the needs of foreign markets through an on-site quick response unit.



8

Companies

+500

Employees

+18k

**Manufacturing
plants worldwide**



1. Silo

PET Solutions has a wide range of silos for the storage of different types and formats of plastic material. The product range is designed to offer maximum storage management efficiency according to the various production requirements of the customer: indeed, the catalogue includes containers in different sizes and for different uses. The silos can be designed for both outdoor and indoor use and are manufactured in aluminium and stainless steel.

PET Solutions can also provide its expertise in terms of know-how, design, consultancy and assistance in the development of the storage and continuous traceability system of the plastic material. The storage and transport system can be independently supervised via administrative software.

TECHNICAL CHARACTERISTICS

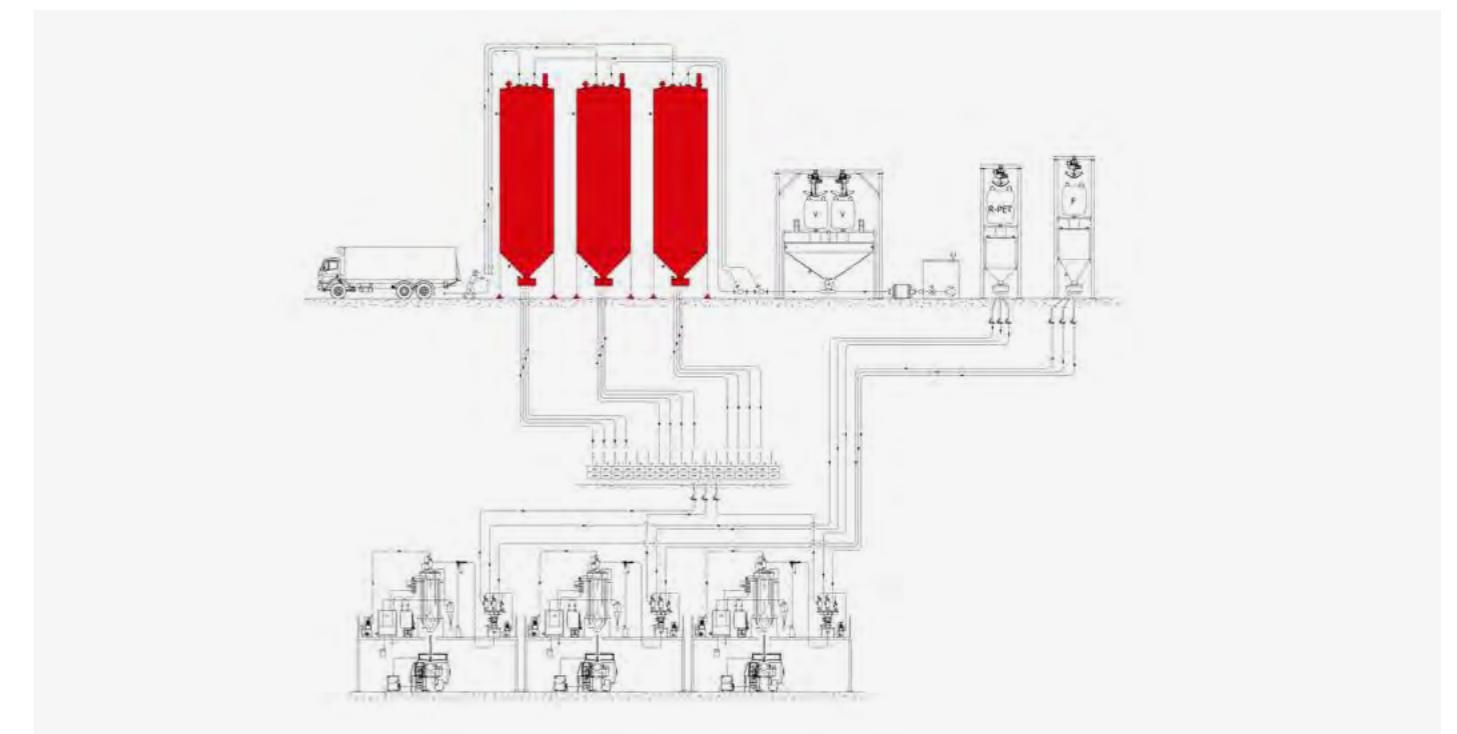
- Cone angle between 45° and 60°
- Single chamber / multi-chamber
- Monolithic / with modular panels
- Aluminium or steel guard rails and ladders
- Wear-resistant stainless steel loading pipes
- Ideal for solids storage

ADDED VALUE

- Reduction of storage space;
- Reduction of material handling costs;
- Reduced waste of plastic material;
- Increased plant productivity;
- Retention of the chemical characteristics of the plastic material;
- Easy and fast material loading;
- Increased plant safety

ACCESSORIES / OPTIONAL

- Flow-aids
- Extraction screw
- Vibrating bottom
- Atex
- Insulation
- Homogeniser
- Telescopic unloader (for truck loading)
- Safety system for load management
- Load cells for weighing
- Ultrasonic volumetric control
- Centralised loading station
- Anti-honking system
- Software monitoring system



2. RBB Series filling systems and SBB Series emptying systems

PET Solutions has a wide range of systems for filling or emptying big bags of plastic materials: these bags are used for the supply and transport of a variety of bulk materials such as granulates, regrind, ground, flakes and powders. These SBB and RBB systems are designed and developed to adapt to customer requirements, in terms of both plant layout and productivity. The frames are modular and customisable, with various options included in the catalogue.

TECHNICAL CHARACTERISTICS

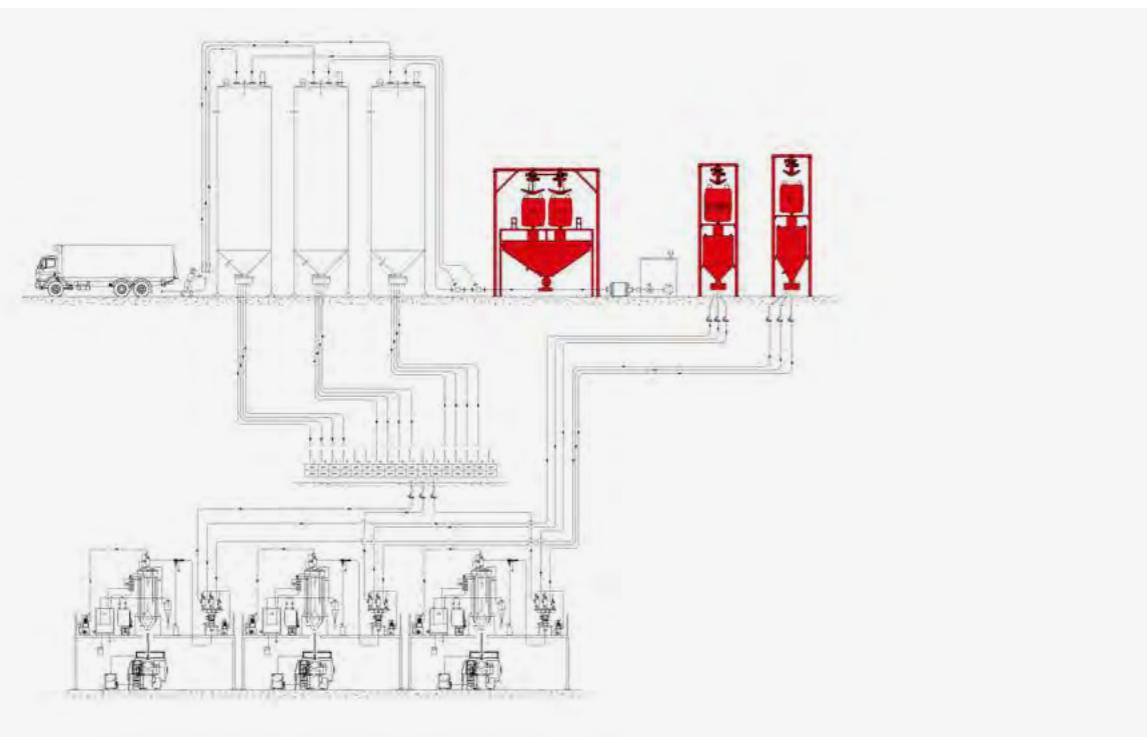
- Painted modular structure, the elements that come into contact with the material are made of stainless steel
- Tank with unloading cone
- Pneumatic gates for material unloading
- Vibrating or shaking systems

ACCESSORIES / OPTIONAL

- Electric hoist for big bag handling
- Bridge breaker application
- Extraction screw
- Electromechanical vibrating mixer
- Flow-aids
- High precision weighing system with label maker
- Extraction probes
- Maximum capacity level sensor
- Customisation with ladders or walkways possible

ADDED VALUE

- Easy to use and access;
- Safe and reliable;
- Adaptable to a variety of big bag sizes;
- Fast installation and modularity;
- Efficiency;
- System integration



3. GCS Series thrust loading unit

The GCS Series thrust loading units are ideal for pneumatically conveying plastic material from a loading station to indoor and outdoor storage silos. The system offers an output of up to 20,000 kg/h with a maximum distance of 100 m horizontally and 20 m vertically.



TECHNICAL CHARACTERISTICS

- Rotary valve with inverter for system calibration;
- Overpressure valves to prevent clogging of the pipeline;
- PLC resin tracking system;
- STAINLESS STEEL tank;
- Management via integrated software

ADDED VALUE

- **Traceability.** The system makes continuous tracking of the resin and plastic material possible;
- **Interface.** The unit interfaces with the silos to streamline load management;
- **Performance.** The GCS provides high efficiency plastic material handling;
- **Compact.** The system can be positioned and handled easily thanks to its compact size and geometry

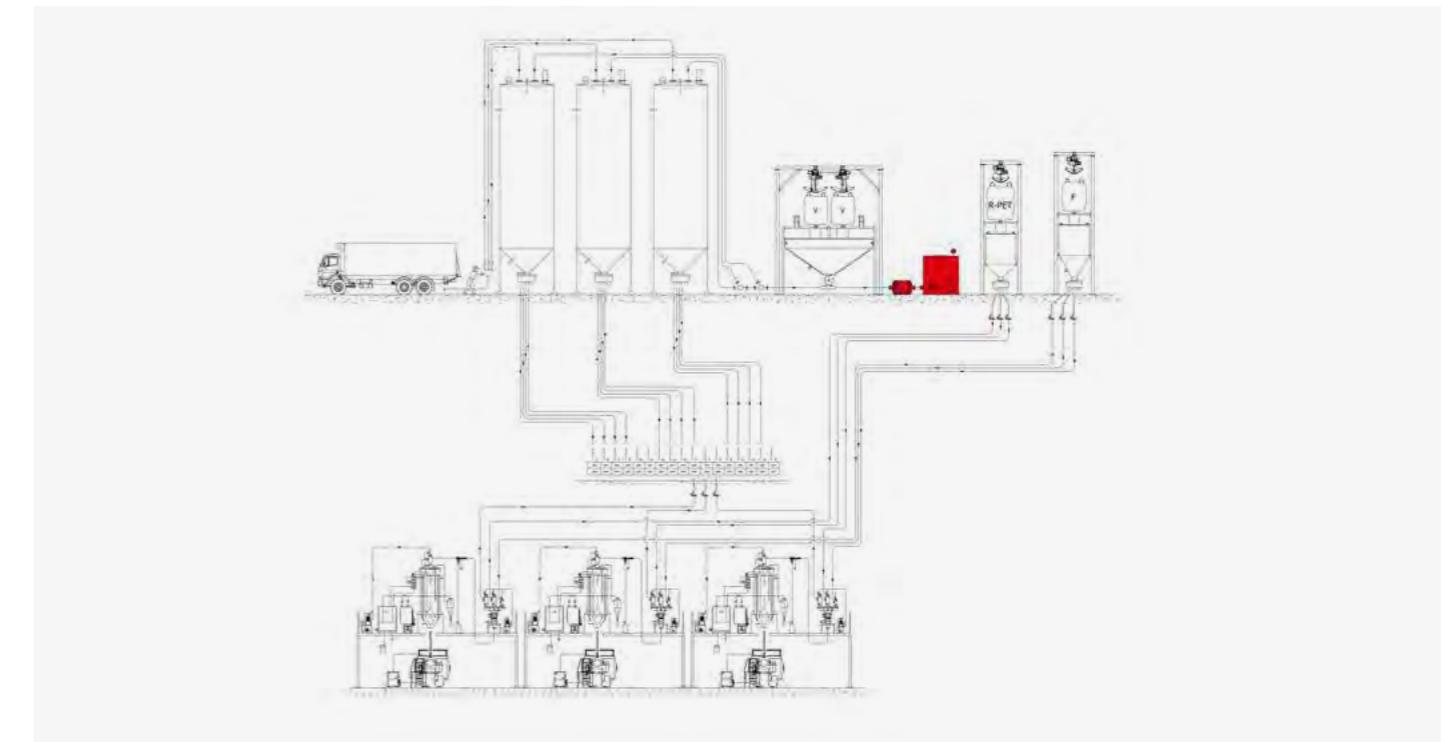
ACCESSORIES / OPTIONAL

- According to production requirements, the machinery can be integrated with various accessories, such as:
- Big-bag emptying tank;
- Big-bag emptying frame;
- Octabin tilter;
- Crane

TECHNICAL DATA

Feature	Voltage	Unit of measure	GCS5.5	GCS11	GCS15	GCS20	GCS45
Blower power	400/50	kW	5.5	11	15	20	45
Rotary valve output	400/50	kW	0.5	1.1	1.1	1.5	1.5
Maximum load bearing capacity		kg/h	900	2500	4000	6000	14000
Horizontal/vertical distance		m	30/10	30/10	30/10	40/20	40/20
Noise		dB(A)	<80	<80	<80	<80	<80

Hourly production values with granules (P.S.A. 0.80 kg/dm³)



4. SM Series manual manifolds

The SM range of manual manifolds allows an accurate sorting of the different plastic materials during their transfer between different areas of the plant.

The manual manifolds are equipped with quick-connect fittings to speed up changeovers and with stainless steel comb piping. In addition, they can also be equipped with the decoder control system, which allows the operator to pre-select the pick-up and destination combinations of the plastic material. The system verifies the correctness of the connections that are made during operation, avoiding contamination problems.

Depending on the application requirements, different decoding system solutions are available.

The manifolds have a modular structure, which can be extended according to customer preferences and requirements.



TECHNICAL CHARACTERISTICS

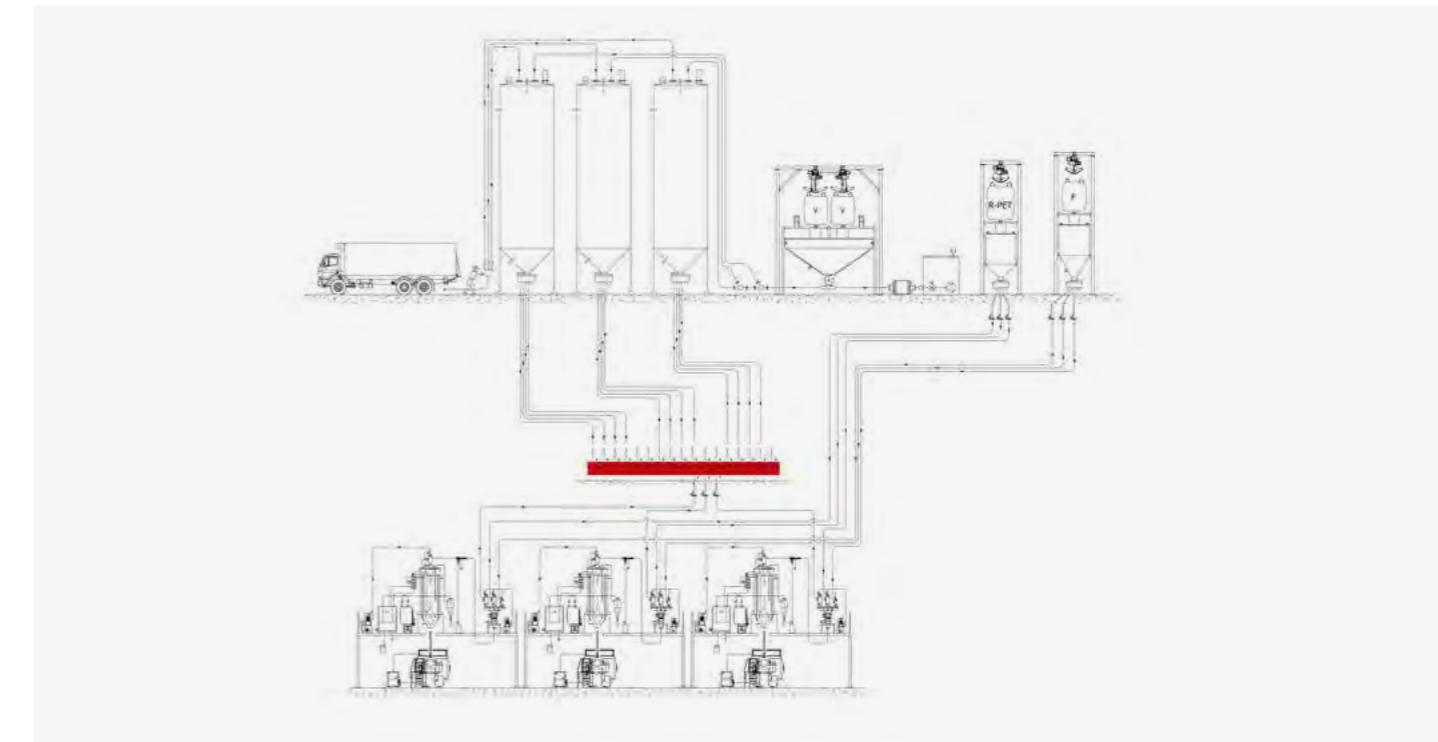
- Quick camlock connections, no gaskets
- Modular design
- Material decoding system
- Up to 60 IN / 60 OUT

ACCESSORIES / OPTIONAL

- Material flow facilitation
- Easy to use, clean and maintain
- Reliability. The mechanical precision parts and PLC control and sensors offer extreme reliability and functionality
- Modularity. The specific design, modular structure and possibility of later expansion make this product very innovative in the industry.
- Safety. No risks for the operator, as the moving parts are all inside the machine.

ADDED VALUE

- Quick-fit connectors to make the mechanical and electric connections easier
- RFID reader for wireless and contactless decoding
- Material collection frame specifically designed to prevent the dispersion of material during intake
- Comb connections: to supply up to 10 machines at the same time



5. DGB Series

Gravimetric feeders now play a fundamental role in many plastics processing procedures: they weigh and adjust the exact percentage of each component as it enters the transformation process. Nine basic models are available, in different configurations of 2 to 8 components.

The operating cycle is fully automatic. The Siemens S7 PLC control with touchscreen allows the operator to set the dosing percentages with ease.

TECHNICAL CHARACTERISTICS

- Eight models can cover outputs from 50 to 3500 kg/h, in various configurations that can measure up to 8 different materials
- Siemens S7 PLC control
- Mixer weighed with load cells and real-time production data
- Set-up operations and reports can be downloaded to USB devices
- In case of shocks or vibrations, the load alterations are recorded and ignored
- Operator interface with colour touchscreen
- Stainless steel hoppers with quick unloading gate
- Polished stainless steel mixer and batch
- 7" touch screen monitor

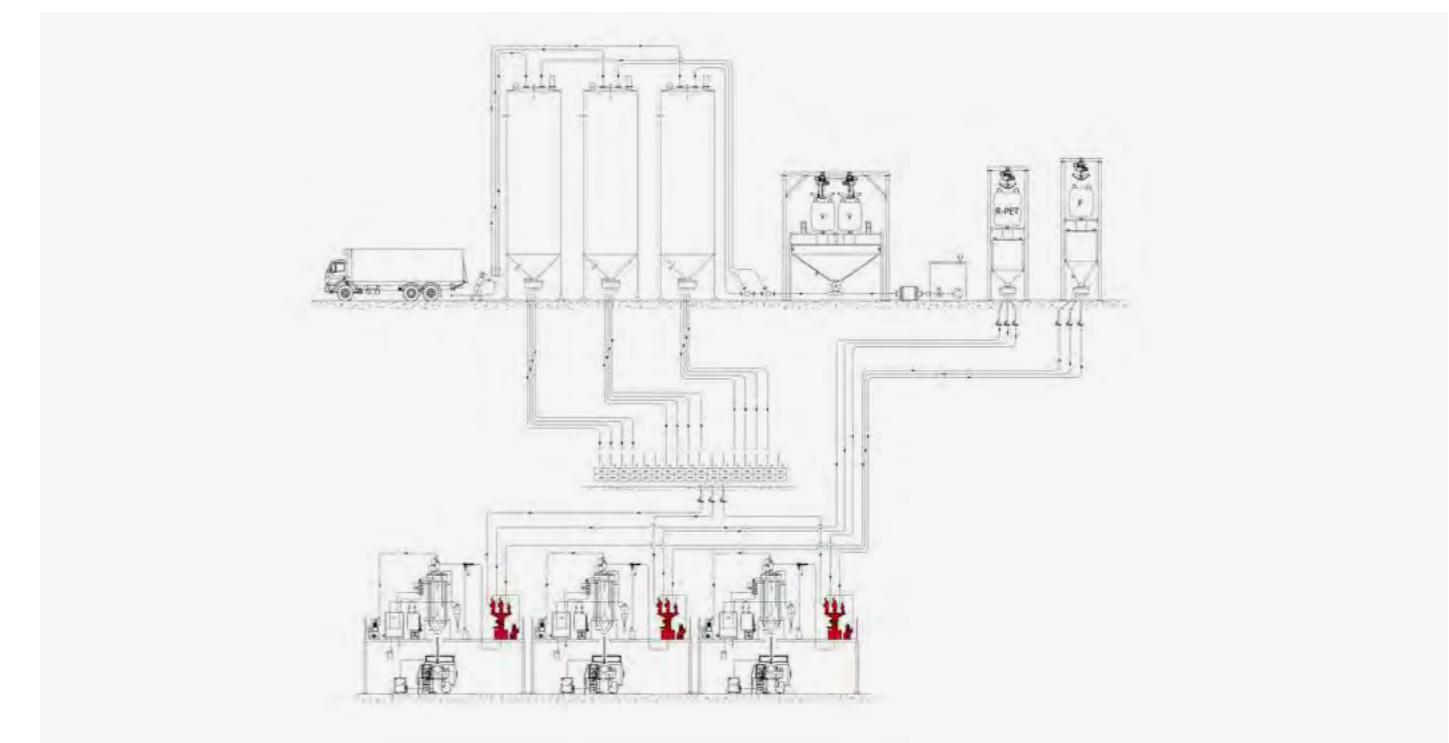
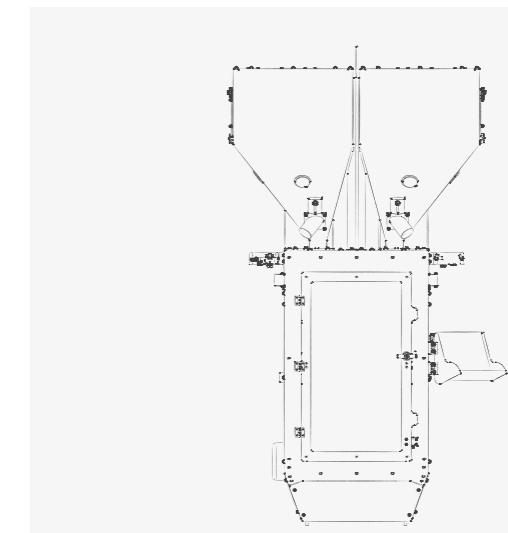
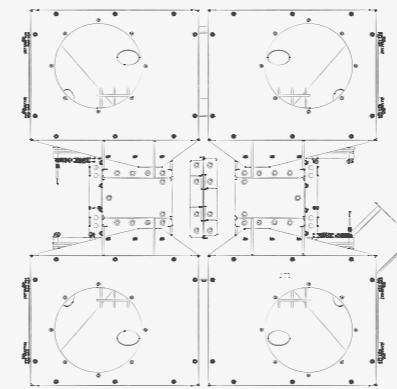
ADDED VALUE

- Constantly monitored precision
- Automatic set-off of density variations of the components
- Automatic recalibration
- Direct setting of components percentages
- Precise and reliable control ensuring a high accuracy of 0.1%
- Suitably dimensioned mixers for accurate mixing
- Precise and ongoing weighing monitoring
- Integrated system



TECHNICAL DATA

Feature	Unit of measure	DGB50	DGB100	DGB200	DGB500	DGB800	DGB1200	DGB1500	DGB3000	DGB3500
Maximum output	kg/h	50	100	200	500	800	1200	1500	3000	3500
Maximum components	N°		4		6			8		
Dosing range	%		0.5-100				0.3-100			
Batch	kg	0.5	1	2	5	8	12	15	25	30
Installed power	kW	0.2			0.4		0.6		1.1	
Voltage/Frequency	V/Hz				400/50-60					
Dimensions WxDxH	mm	560x520 x820	751x637 x951	830x581 x1130	870x1040 x1530	1080x1160 x1890	1320x1275 x1990	/	/	/
Weight	kg	70	110	130	250	270	300	350	/	/



6. Other products

Sorter

Sorters are technologically advanced machines that use optical sorting systems (with hyperspectral sensors) capable of identifying and separating different plastic materials even if they have the same colour. These solutions are specifically designed to achieve the level of purity of the selected plastic materials. PET Solutions offers Sorters that perform the most efficient sorting and separation of different types of recycled plastics.

TECHNICAL CHARACTERISTICS

- Remote monitoring of machine performance;
- Image processing with photographic capture;
- Excellent sorting performance;
- The embedded Windows 7 GUI ensures easy connection to corporate networks and the remote service system;
- Automatic cleaning system integrated in the sorter.

ADDED VALUE

- Ideal for a wide range of sorting requirements;
- Low operating costs

Granulators

PET Solutions' offer includes granulators, machines capable of efficiently grinding various types of plastic material. Our range of granulators are made for on-board press applications (injection, blow moulding and extrusion and for general use), and indeed they can be used for:

- In-line grinding of sprues and scrap, elastomers and glass-fibre filled technopolymers with injection moulding machines.
- Grinding of preforms and blow-moulded parts off-line.
- Recovery of blow moulding rejects such as blow-moulded parts, sprues, parisons in line at high temperatures.

TECHNICAL CHARACTERISTICS

- Rotating discs integrated in the motor for anti-side creep
- Overheating and dust proof containment rings
- Wear-prevention chamber
- No-blowback hoppers
- CE-compliant safety systems
- Soundproofing for noise reduction

ADDED VALUE

- **Ground material quality:** the machine ensures that the mechanical and physical characteristics of the plastic material are maintained. The ground material is homogeneous and uniform over time
- **Effectiveness of offered solutions:** PET Solutions offers a complete range of devices for handling plastic material waste of any shape and weight
- **Energy efficiency:** low electric power absorption
- **Easy to use and maintain**

ACCESSORIES / OPTIONAL

- Single/Multiple blades
- Fixed/Variable speed
- Cyclone blower
- Collection tray
- Proportional valve
- Tilted screw
- Cooling system

Feeders

The feeders make the automatic conveyance of plastic granule materials possible. PET Solutions offers two series of feeders:

- VLM Series single-phase feeders, with an extraction capacity of up to 600 kg/h of material at a maximum distance of 10 m.
- VLV Series Venturi feeders, with an extraction capacity of up to 30kg/h of material at a maximum distance of 4 m.

Machines with integrated extraction unit.

TECHNICAL CHARACTERISTICS

- Two-stage 900W blower.
- Automatic filter cleaning with compressed air.
- Inspection hatch with stainless steel vent filter.
- Microprocessor card control, keyboard and digital LED display for operating status and alarms signalling.
- Integrated double lid dividing the motor bay from the blower, thus promoting better operation.
- Aluminium fastening ring for 360° installation.
- Extraction pipe and probe included.

ADDED VALUE

- Easy to use.
- Low maintenance.
- Safe and reliable.
- Quick installation.

ACCESSORIES / OPTIONAL

- Proportional valve with percentage settings.
- Acoustic alarm.
- Mini Pirex hoppers for direct installation on the machine.
- Version with control integrated in the dosing unit available.



7. Monitoring System

The Monitoring System developed by PET Solutions is an integrated management and control software for the entire plastic material production and processing plant. The system makes it possible to monitor and track all the processing phases, from delivery and storage of resin to the actual finished product output.

Thanks to multilevel data collection, the supervisor can monitor the system's energy consumption and efficiency on an ongoing basis. Every proposed solution also gives the opportunity to control and monitor the system remotely, to ensure quick action and technical support when necessary.

PET SOLUTIONS OFFERS THREE VERSIONS, TO SATISFY DIFFERENT REQUIREMENTS

- **Wall Version:** designed specifically for the requirements of the production department, it collects process data and the operating status of every single device in real time. All information is then processed by the software and shared on multiple screens installed in the customer's production department. This solution provides fast, real-time information on the operating status and efficiency of the production department and, specifically, of every individual device.
- **Premium Version:** designed specifically for the requirements of plant managers, this desktop solution makes it possible to display and fully control every single device in the system. This solution provides preliminary diagnostic capabilities through the alarms history and the diagrams for each variable, as well as the opportunity to set the parameters for each machine.
- **Factory 4.0 Version:** designed specifically to address the requirements of plant managers and system and production logistics managers, this solution integrates the Premium version with the full management of the materials flows. More specifically, thanks to its integration with the customer's MRP or ERP systems, the Supervisor manages the flow of material from raw material to finished product, all the time collecting information on the access of goods to be processed, consumption thereof, the exit of finished products and on any production waste. The level of technology and innovation of the solutions is the pivotal concept of Smart Factory 4.0 and follows the Industry 4.0 guidelines.

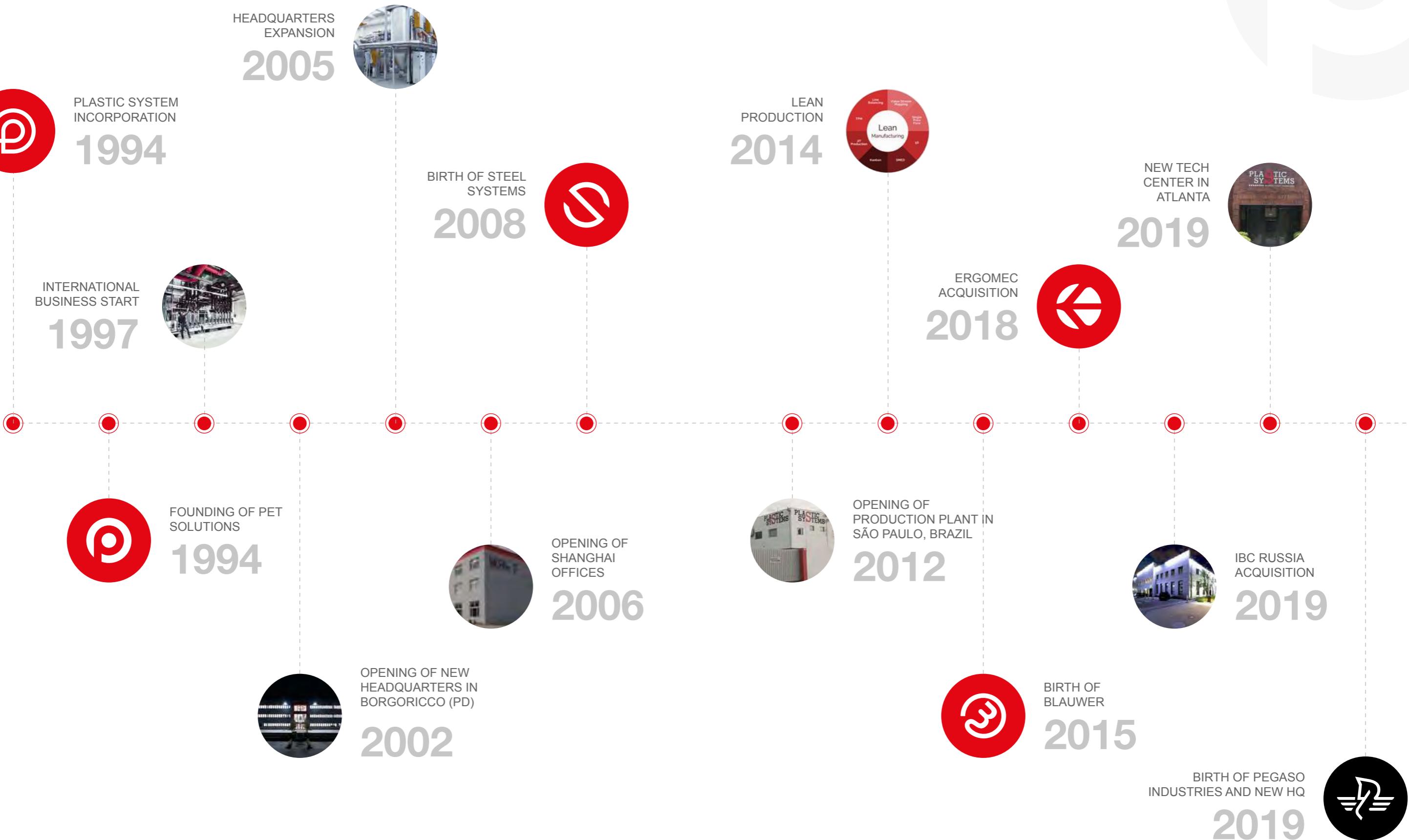


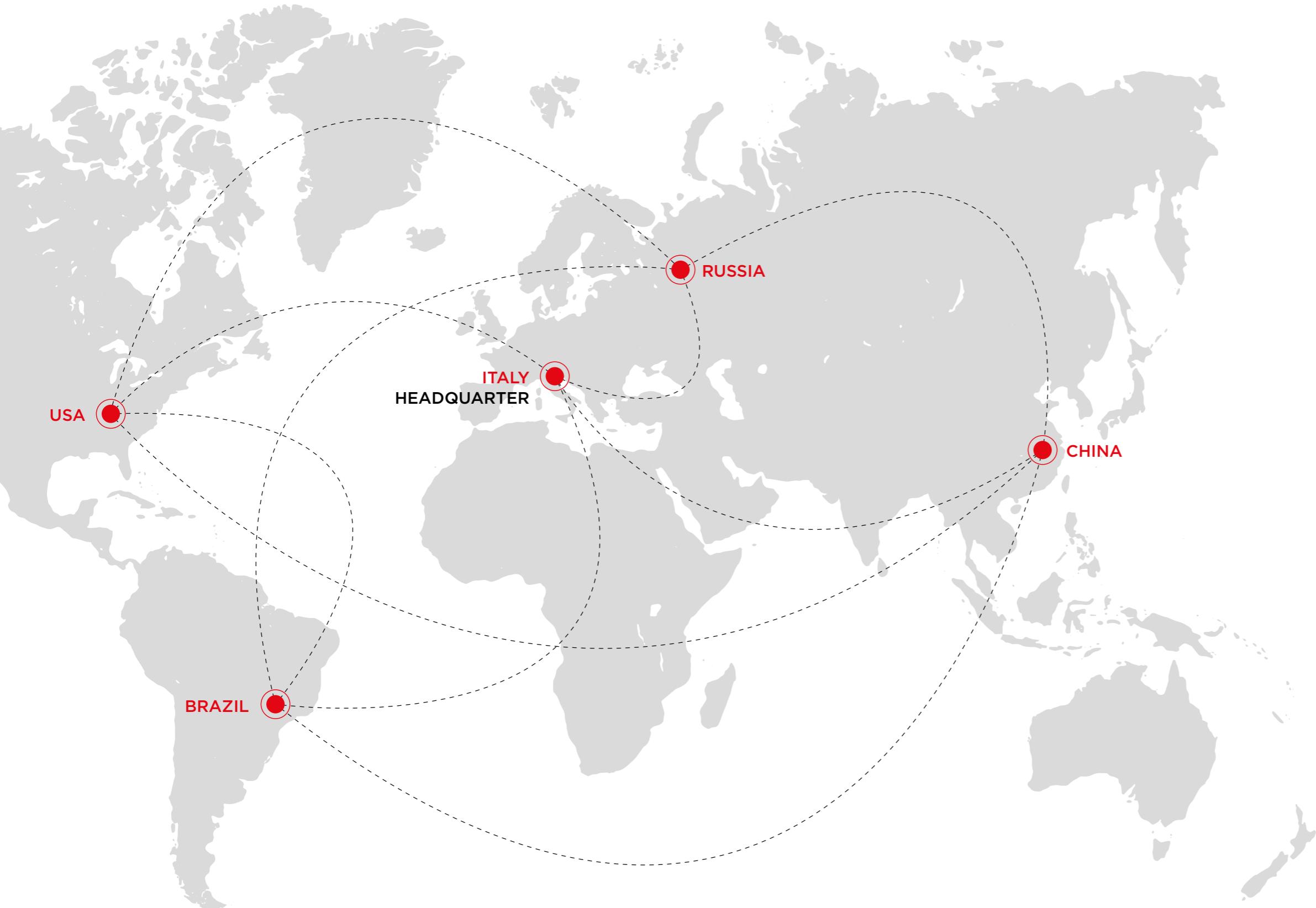
General summary



Gravimetric control GBU7

8. History



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**FROM PROJECT
TO OBJECT
THROUGH INNOVATION
AND DESIGN.**

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A brand of

