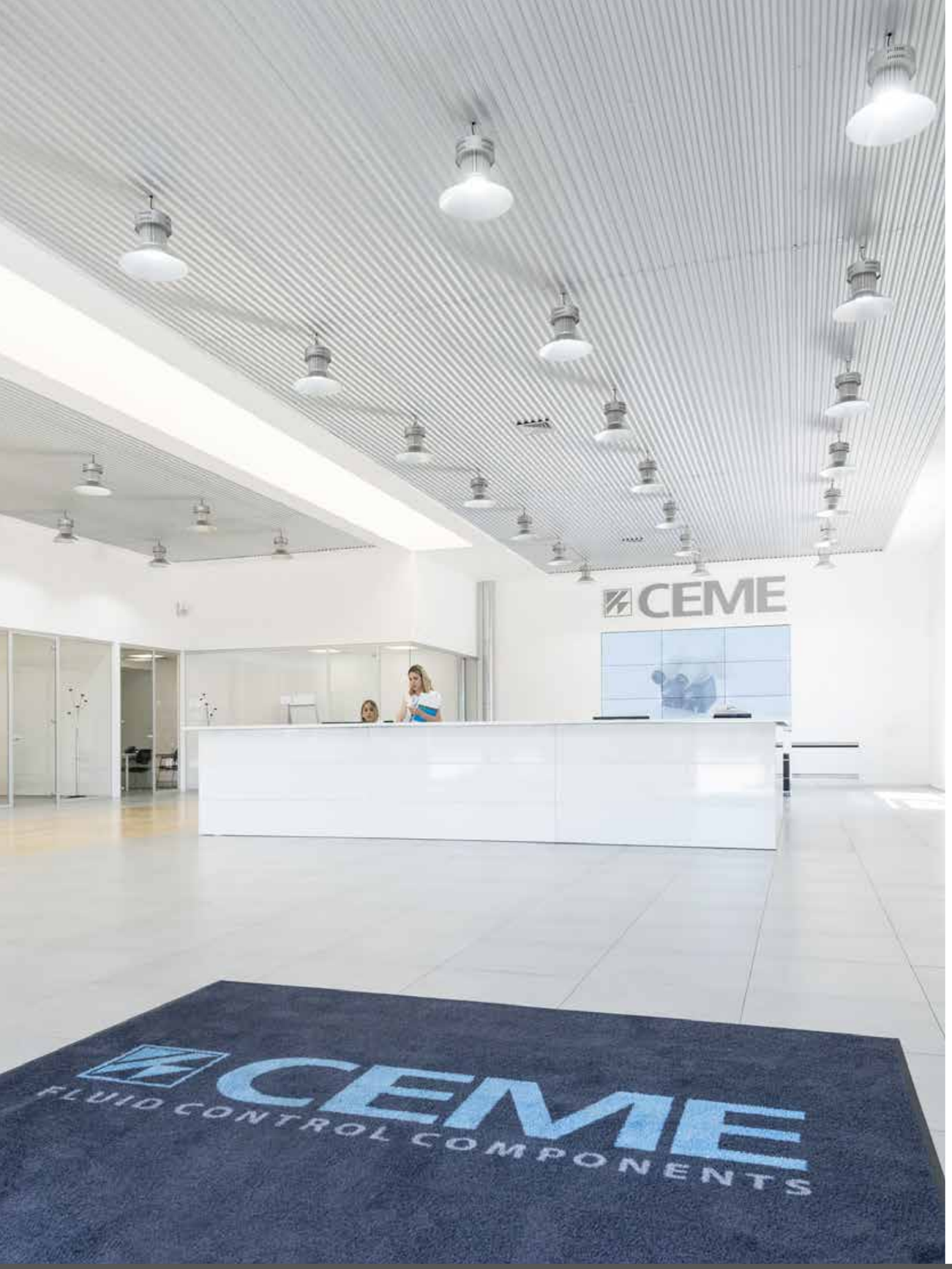
CEME

FLUID CONTROL SOLUTIONS

2019

Sustainability Progress Report



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A MESSAGE TO OUR STAKEHOLDERS

These are moments of profound change that touch upon a multitude of aspects pertaining to our way of doing business. Indeed, in 2018 CEME was pleased to welcome new shareholders. This is a crucial chance to further develop our world-leading position, and also to enter new sub-sectors and geographies to support the growth of the company both organically and through a program of acquisitions.

The new course is complemented by a renewed and revived focus on Environment, Social and Governance topics. We are indeed well aware that a sustainable approach to business is an inescapable goal to strive for – and a necessary one in order to maintain our market leadership. I am therefore proud to unveil our first Sustainability Progress Report, which shall help spread the culture of sustainability throughout the Group by raising awareness on the impacts directly related to our activities and shall help reinforce relationships with our key stakeholders.
It is divided into three main chapters, each mirroring our deeds in the field of product and process quality, our relationships with our people, and the environment. Furthermore, the present document, inspired by the highest principles of sustainability reporting, attests to our firm commitment to the United Nations Global Compact initiative, which we adhered to in April 2020.

Although the Report focuses on 2019, we cannot but mention the outbreak of the Coronavirus pandemic at the beginning of 2020 and the ensuing health crisis all over the world: in Italy, it hit hardest in the Northern region of Lombardy where CEME is headquartered, and in China, in the Guangdong province where the Zhongshan plant is located. Thanks to the great work of our people and the flexibility and know-how we can draw from, we are combating this emergency by guaranteeing business continuity and collaborators' safety as key priorities.

Roberto Zecchi, CEO

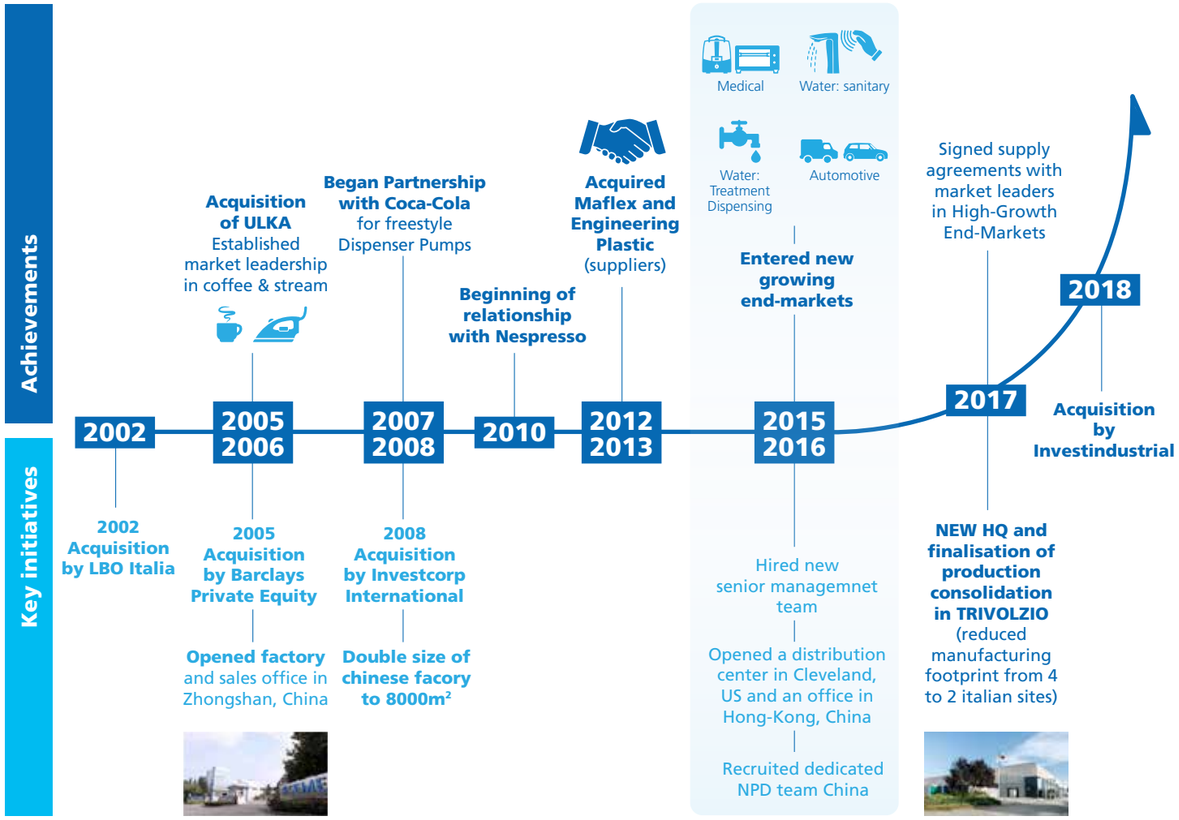
40 YEARS OF EXPERIENCE AND INNOVATION

A GREAT PAST FOR A BETTER FUTURE

CEME HISTORY

A world leader in the production of industrial solenoid valves and pumps for many years now, CEME was founded in 1974 by Renzo Miotti. Later in the 1980s and 1990s, and after the construction of the Tarquinia (VT, Italy) site, CEME decided to expand its business by investing in its production facility. The implementation of a specialized engineering department and of advanced assembly lines allowed it to multiply its application sectors and to extend its product portfolio to the design and development of fluid control components, such as solenoid pumps, solenoid valves, pressure switches, flow meters and complete accessories.

The 2000s then witnessed the expansion of CEME's presence beyond national and European borders. In 2005 the Group opened a production facility in Zhongshan, China, dedicated to manufacturing semi-finished products for intercompany purposes, and to covering Asian market demand for high-quality, cutting-edge valves. The following year, CEME decided to further consolidate its territorial hold by absorbing the Retorbido (PV)-based ULKA, an undisputed market and technology leader for solenoid piston pumps: the acquisition triggered the Group's growth by giving it full access to the Coffee & Steam market, thus boosting sales and customer portfolio.



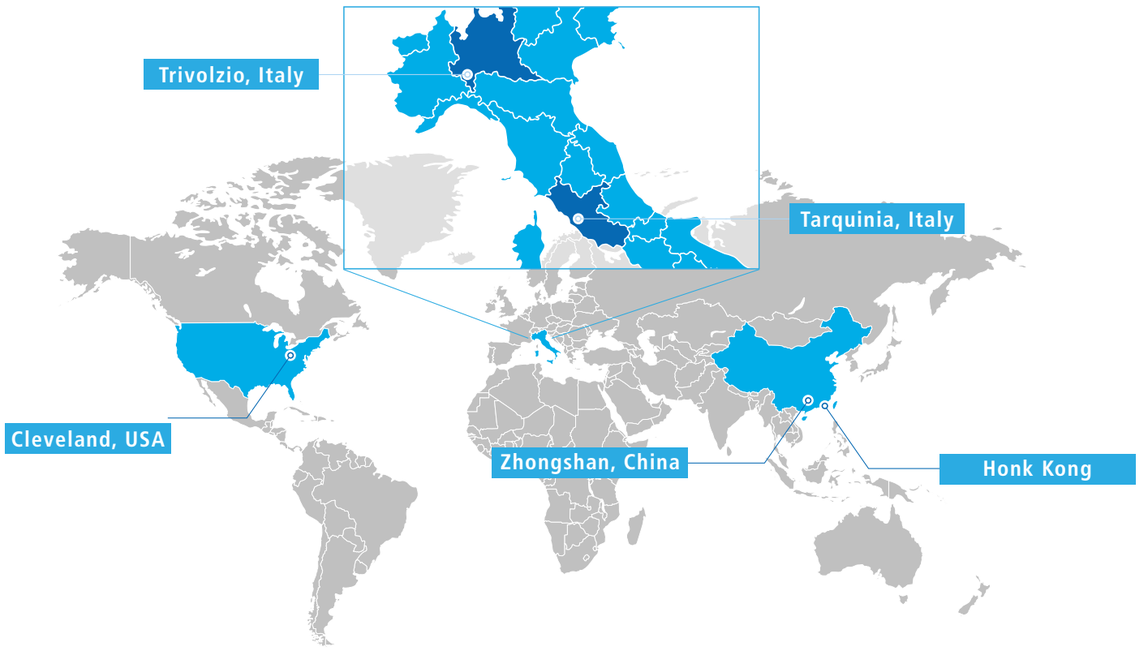
In ever-ascending evolution, the 2007-2012 period saw the birth of important partnerships with new key accounts, the doubling of Chinese plant size to 8,000 m2 and the acquisition of two important suppliers (Maflex and Engineering Plastics). This latter element allowed CEME to develop resilience and gain independence from external factors by consolidating one particular strategy that makes up for the Group's unique approach and success: the internalization of as many components of its chain of value as possible.

The 2010s marked a real watershed for the Group: the complete rebuild of the Senior Management Team and the unification in Trivolzio (PV, Italy) of the two production sites in Retorbido and Mozzate (VA, Italy) was accompanied in 2015 by the important decision to enter new growing end-markets, such as medical, sanitary water, water treatment/dispensing and automotive. Furthermore, CEME strengthened its Asian market leadership by building on Zhongshan's competences: a dedicated New Product Development (NPD) team was recruited, aimed at increasing the plant's capacity to face region-specific market demands and covering the complete process of bringing a new product to life, from conception to mass production. CEME's territorial presence further expanded with the opening of two new locations, essential to enhance its foothold in strategic markets: a distribution center in Cleveland, US and an office in Hong Kong, China.

The finalization in 2017 of production consolidation in Trivolzio (PV) by unifying manufacturing processes in Carugate (MI, Italy) and Brugherio (MB, Italy) – and thus reducing the number of CEME plants on Italian soil to two – was the prelude to a new chapter in the Group's history. Indeed, in 2018 the Company was indirectly acquired by a fund managed by Investindustrial, a leading European group of independently management investment, holding and advisory companies.
This new path of success, which allowed the Company to consolidate its market dominance while constantly increasing its economic performance, was enriched in 2019 by the decision to draft CEME's first Sustainability Progress Report.

CEME TODAY

With registered revenues of EUR 156.5 million and 120 million products produced per year, CEME employed as many as 857 people as of December 31st 2019. The vast majority of them are located in the Group's three production, operating plants and offices, headquartered in Italy and China, while the remainder are located in the US and in a small office in Hong Kong.



The Trivolzio site, near the city of Pavia, hosts the Group's administrative headquarters and the Company's largest manufacturing facility, equipped with high levels of cutting-edge automation. Since the plant deals mainly with assembly, it does not host intensive production activities, whereas the Tarquinia (Viterbo) site does. Furthermore, the central Italy plant focuses mainly on producing semi-finished products and components for the intercompany flow, while the northern Italy site primarily deals with national and international clients. The two sites combined employed 469 people in 2019.

The Zhongshan plant is the reference production center for the Asian market, covering its main client base. Thus, the Chinese site, which employed as many as 388 people in 2019, deals with both intercompany semi-finished products and components, and final valves and pumps sold in the regional territory.

MISSION
To be the world point of reference in the solenoid valve and pump market. We invest in innovation to create functional products. We use high quality materials to obtain excellent results. We want to be the ideal technical partner for all clients.

Finally, as a strategic location to support CEME's growth in North and South America, the recently opened distribution center in Cleveland, Ohio (US) employed 5 people, while the Hong Kong sales office – the hub of the Company's commercial relationships with the Far East market – employed 2 people in 2019.

CEME SITE-SPECIFIC COMPETENCES

TRIVOLZIO Italy	• Administrative and operational HQs • Research and Development laboratory • Valves and pumps coil winding and encapsulation • Solenoid valves and solenoid pumps assembling and testing • Internal automation
TARQUINIA Italy	• Mechanical machining and transfer processing • CNC and traditional mechanical processing • Basic components assembly • Laser welding
ZHONGSHAN China	• Solenoid valves and solenoid pumps assembly and testing • Valves and pumps coil winding and encapsulation • Plastic components molding

MARKET PRESENCE

Global presence and continuous expansion are a distinctive trait of CEME's success. The constant diversification of the Group's product portfolio over the years has allowed it to reach an all-time record expansion – both in territorial and applications terms. With key accounts at some of the most renowned and solid companies all around the world, CEME products are sold in 70 Countries across five continents, showing a unique global platform scale.
As regards market segments hold, seven areas stand out as essential for the Group's business. It is important to point out that the success CEME can count on derives from an operating model that puts clients' needs and requests at the center, offering hyper-customized, tailor-made solutions that embrace innovation and quality.

Coffee

For years, CEME has been an undisputed reference in the world of coffee. Thanks to the ULKA pumps line, mounted on the best coffee machines for domestic use, and to the family of solenoid valves in food-grade technopolymer and steel, CEME is able to supply a complete kit of components necessary for the control and management of fluids. The technical team collaborates with world leaders in the sector and develops innovative solutions dedicated to the most complex needs. The Group not only addresses the consumer side of coffee machines, but professional and HORECA as well: CEME's technical team engineers' tailor-made solutions that satisfy the most demanding requests from industrial clients.

Beverage

CEME manufactures solenoid valves and pumps for multiple applications in the beverage world and a wide range of products for drinking water applications, in compliance with worldwide reference standards. In this sector, in addition to equipment for the control of the principal refrigerant fluids, CEME has developed a family of vibration pumps for dealing with syrups, concentrates and alcoholic liquids. The Group's product portfolio for the beverage market can also count on patented plastic valves and control and safety components (pressure switches, transducers, safety valves) that allow clients to have a complete set of components available for the design of new, fully automated drink distributors.

HVAC

We offer a wide range of solenoid valves designed specifically for refrigeration systems and applications in the refrigeration and air conditioning industry.
These include directly operated and servo-controlled valves, made up of coils with different voltages, solenoid valves for water and water-glycol used on chiller units, and peripheral pumps ideal for recirculation functions. Furthermore, CEME is the absolute reference for condensate discharge systems for air conditioning machines.

Steam

CEME has always been a pivotal actor in the world of ironing and steam cleaning. The most important brands in the sector rely on the Group for solenoid valves, pumps, pressure switches and safety valves to guarantee maximum efficiency and quality for their products. Temperature and pressure make steam a critical element, especially when the system concerns common and daily use appliances. For this reason, the Company performs frequent and rigorous tests on its components.

Medical

The search for innovative and reliable products, combined with high quality standards derived from fully automated production, allowed CEME to enter the medical field as well. The Group produces solenoid valves and pumps that find application in various medical systems such as sterilizers, autoclaves, oxygen concentrators, solutions for dentists and others. The range of plastic and steel solenoid valves is completed by a series of total separation pinch solenoid valves, specifically developed for this market.

Welding

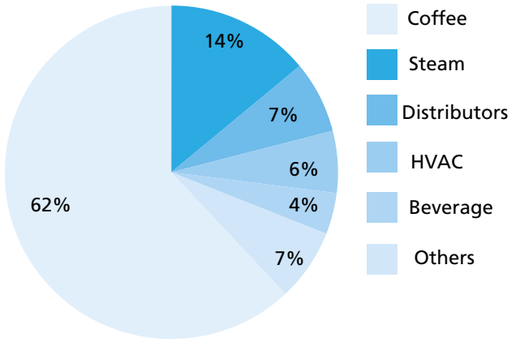
CEME is one of the leaders in the supply of solenoid valves and pumps for welding systems. The Group's excellence in the sector has led to the forging of solid relationships with the most renowned brands on the market thanks to the development of innovative and customized solutions. CEME produces a wide range of solenoid valves for inert gases, peripheral and vibrating pumps for cooling circuits and pressure switches for system control and safety.

Sanitary

CEME offers a wide choice of solenoid valves for water flow control in all conditions. The catalog includes solenoid valves with hydraulic connections, different types of seals and gaskets and a series of coils for all types of electrical voltage. Used for thermo-hydraulic systems, washing systems, sanitation, cooling systems, irrigation, and water treatment, the Group has recently added a new series of bi-stable solenoid valves (latching valves), ideal for specific sanitary systems, such as automatic taps and timed showers.

The following graph shows that out of the seven main market segments, Coffee alone represents almost **two-thirds** of the Group's revenues and stands out as the fundamental revenue source for CEME. Market leadership in Steam translates into 14% of the Company's total revenue, while distributors and Beverage combined make up 11%.

REVENUE BY MARKET SEGMENT



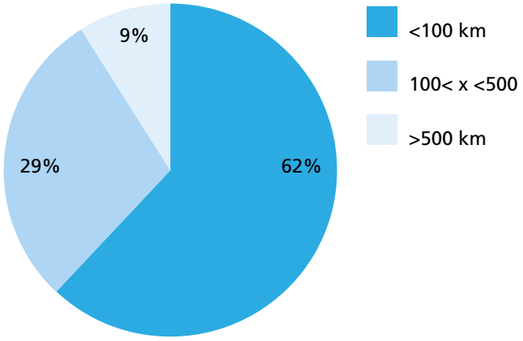
A FOCUS ON SUPPLY CHAIN

CEME's success is a mix of innovation and the automation of its processes, attention to clients' needs and, in the upstream side of the Group's value chain, the quality of the materials procured by suppliers. Transformation and production processes are structured in a way that takes advantage of the Company's 40+ years of expertise and mastery, and are thus carried out almost entirely internally, from R&D to product delivery. As a consequence, CEME relies on a group of trusted suppliers from the steel sector that deal mainly with feeding production with materials essential for the crafting of valves and pumps. A crucial element is proximity – a pivotal and strategic component. Primarily, a short supply chain allows the development of a long-lasting relationship based on trust, and entails a profound knowledge of one another's specific dynamics: CEME and its suppliers are tied together by framework contracts, which can be regarded as open, on-call contracts activated by the Group, depending on clients' requests and production volumes. This element then gives rise to a very stable trend over the years as far as the total number of suppliers involved is concerned. Secondly, a relationship based on reliability and flexibility allows CEME to boost its credibility with clients by guaranteeing fast production and quick delivery times with unmatched levels of quality. Lastly, a short supply chain demonstrates attention to the broader community as well, since the vast majority of suppliers are located around the three Italian regions of Lombardy, Piedmont and Veneto.

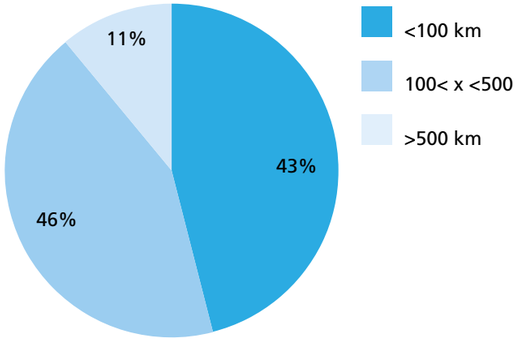
In its manufacturing process, CEME uses semi-finished items produced both externally (with more than 100 suppliers of raw materials and components) and internally (Trivolzio and Tarquinia, Italy). The assembly of the finished products can be carried out both internally in the Trivolzio and Zhongshan, China, plants, and externally by selected subcontractors.

As shown, almost two thirds of CEME's suppliers are less than 100 km away from the Group's Italian headquarters, while 29% are located between 100 and 500 kilometers away and only 9% are more than 500 km away.
This latter statistic is mirrored by the Company's expenditure on suppliers (11%), while the remainder 89% is split into two almost identical shares for suppliers within 100 km (43%) and those between 100 and 500 km (46%). By grouping the distance ranges into two separate clusters and fixing the cut-off point at 300 kilometers, it is possible to observe an almost perfect alignment between the share by distance (84%-16%) and the expenditure share (79%-21%).[1]

SUPPLIERS, BY DISTANCE (ITALY)



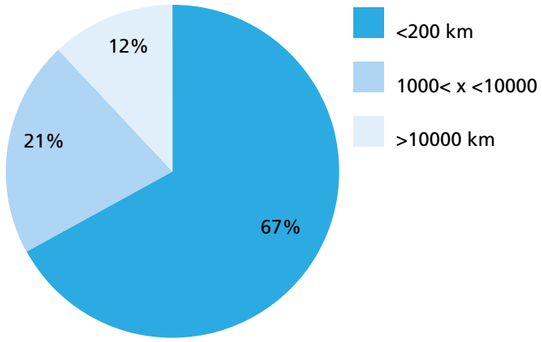
EXPENDITURE ON SUPPLIERS, BY DISTANCE (ITALY)



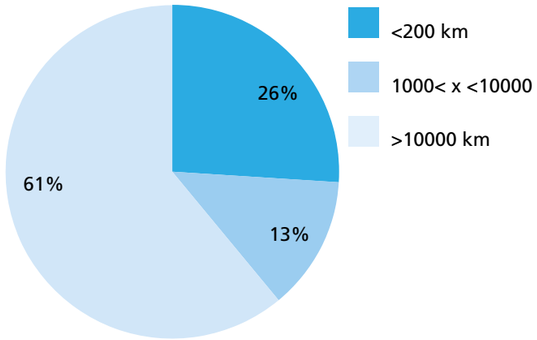
By contrast, Zhongshan has a completely different supply chain structure, mainly due to regional characteristics and its tight relationship with the Italian HQs. As a consequence, 67% of suppliers are less than 200 kilometers away from the regional hub, while 12% are more than 10,000 km away and the remaining 21% are between 1,000 and 10,000 km away. Expenditure on suppliers shows an upside-down trend with respect to distance: 61% goes to suppliers more than 10,000 kilometers away, while 26% and 13% goes respectively to suppliers between 1,000 and 10,000 km away and less than 200 km away.[2]

[1] Distances are calculated taking into consideration CEME Italian HQs and the suppliers' HQs.
[2] Distances are calculated taking into consideration CEME Zhongshan HQs and the suppliers' HQs.

SUPPLIERS, BY DISTANCE (ZHONGSHAN)



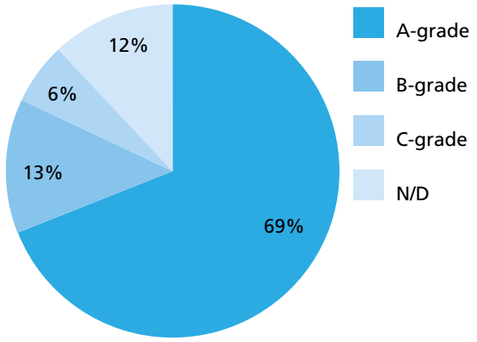
EXPENDITURE ON SUPPLIERS, BY DISTANCE (ZHONGSHAN)



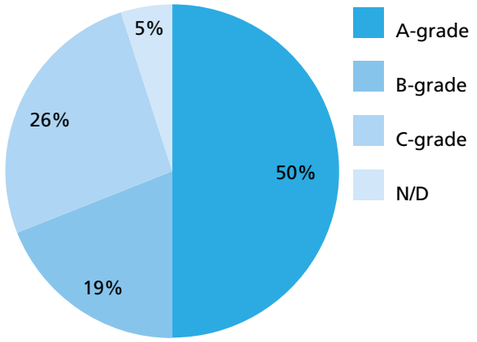
Since CEME's business model and reputation are dependent on product quality and therefore client satisfaction, quality assessment is pivotal in supply chain management. Suppliers are constantly monitored and controlled by the Group: they are required to deliver the materials in a timely manner, in compliance with technical standards. The Group's Quality Department makes an assessment, from which point the suppliers are either accepted according to CEME's stringent quality and financial standards or rejected. In particular, suppliers are assigned to three categories: A-grade, where the supplier does not need to be further audited; B-grade, where corrective measures are requested; and C-grade, where the supplier is not eligible and needs to undertake important changes in subsequent years in order to be upgraded. Although this latter category signifies the Group's hold on the quality of its products and components, it does, on the other hand constitute an element of attention towards its suppliers, entailing the transfer of the Company's expertise and know-how in order to help C-graded suppliers to identify points of improvement and work to mitigate flaws.

The following graphs show the share of and expenditure on suppliers by quality level for the Italian plants of Trivolzio and Tarquinia. A-grade and B-grade suppliers represent 82% of the total (respectively, 69% and 13%), while C-grade suppliers represent 6%. As for expenditure, A-graders get half of the budget, while B-grade and C-grade suppliers account for 19% and 26% respectively.

SUPPLIERS, BY QUALITY LEVEL (ITALY)



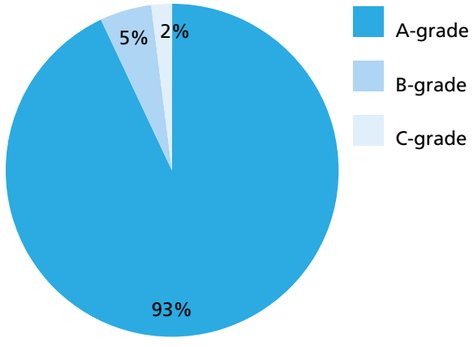
EXPENDITURE ON SUPPLIERS, BY QUALITY LEVEL (ITALY)



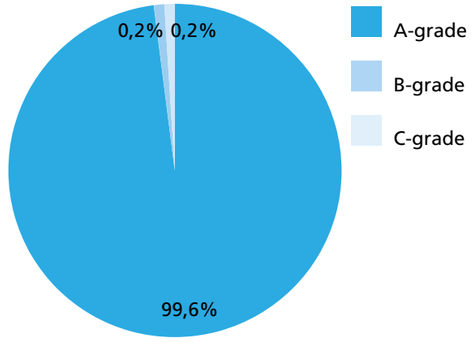
As for the Zhongshan plant, both suppliers and expenditure on suppliers are decisively oriented towards A-graded entities, mirroring the regional hub's dedication to guaranteeing the highest levels of quality for its products starting from the procurement phase.
Indeed, the A-grade represents as much as 93% of all CEME Zhongshan's suppliers, while the remaining 7% is split between 5% of B-graded and 2% of C-graded firms. This pattern is even more marked as regards expenditure on suppliers: in fact, A-graded get almost all the budget (99.6%), while B-grade and C-grade suppliers receive half of the remaining 0.4% each. The structure and composition of suppliers has not varied substantially in the last few years.

They are internally audited on a yearly basis under the ISO 9001:2015 Quality Management System, ISO 14001:2015 Environmental Management System and Food Contact Materials (FCM) standards checklists. Furthermore, they must adhere to CEME's Code of Ethics and Anti-Corruption Policy, as required by law. For the time being, the Group does not screen its suppliers through a sustainability assessment, but it is expected to be implemented within the next two years.

SUPPLIERS, BY QUALITY LEVEL (ZHONGSHAN)



EXPENDITURE ON SUPPLIERS, BY QUALITY LEVEL (ZHONGSHAN)



GOVERNANCE

In 2018 CEME implemented a control and governance system based on a Board of Directors that comprises 6 members[3] and which is entrusted with the powers to ensure the ordinary and extraordinary management of the Company. The following table reports the BoD composition.

[3] In 2019, the Board membership consisted of one female and five males. As regards age composition, there are no members under 30 years of age, 4 members over 50 years of age and the remainder in the middle-age group. No changes were noted either in gender or age composition between 2018 and 2019.

ETHICAL BUSINESS

CEME organizes its activity to comply with the laws and regulations in force, as well as with the principles and rules of conduct expressed in its Code of Ethics. These principles, with specific reference to the Company's "anti-corruption" policy, are calibrated also against the UK Bribery Act, issued in 2010. The Code of Ethics represents an enunciation of corporate values, as well as the rights, duties and responsibilities of CEME with respect to all its stakeholders. The document contains general principles and the rules of conduct that inform the Group's daily activities and represent its standard of reference. CEME strongly believes that business ethics are an inescapable precondition for the success of the Company. Thus, the Group pursues its mission by operating legally and fairly, creating added value for its shareholders and fostering the growth of the Company, its employees and collaborators.

As provided by Model 231, pursuant to Italian Legislative Decree no. 231/2001, and all applicable legislation, CEME has appointed a Supervisory Body (Organismo di Vigilanza) entrusted with the task of controlling internal implementation and corporate compliance with the model, as well as its updating process. The Supervisory Board comprises one external member, who fulfills the regulatory requirements in terms of autonomy, independence and continuity, and an internal secretary.

The implementation of the Code of Ethics and of Model 231, together with CEME's certified ISO 9001:2015 and 14001:2015 Quality and Environmental Management System, represents the framework to ensure compliance with national and international applicable laws and regulations.

As a direct result, no incidents of corruption, significant fines or sanctions, activities under human rights safeguard scrutiny were recorded in the reporting perimeter. Furthermore, neither legal actions for anti-competitive behavior, anti-trust or monopolistic practices, nor non-compliance with norms and laws concerning social and environmental topics, nor privacy and personal data mismanagement complaints were recorded.

OUR SUSTAINABILITY PATH

In order to strengthen its relationship with its key stakeholders, CEME is unveiling its first Sustainability Progress Report to start on an important sustainability path. As a direct consequence of this commitment, the Group aims to increase its understanding of how social and environmental sustainability matters relate to its daily activities. As regards the external sphere, the present document will give insights on the impacts resulting from the Company's way of doing business.

CEME'S KEY STAKEHOLDERS

At the beginning of its path towards sustainability, CEME mapped its key stakeholders, that is, the stakeholders most subject to the Company's influence or sway: the following table shows the outcome of this process of identification and prioritization. Furthermore, for each stakeholder cluster, a description of existing engagement activities is provided.

STAKEHOLDER CLUSTERS AND ENGAGEMENT ACTIVITIES

Collaborators	Continuous dialogue between the HR department and employees; specific initiatives
Suppliers	Continuous dialogue
Commercial partners	Continuous dialogue; periodic meetings
Local communities	Continuous dialogue; formal meetings and collaborations; specific initiatives
Competitors	None
Clients	Continuous dialogue; periodic meetings; cooperation on R&D of new products; fairs
Investors	Formal meetings; periodic management reports
Regulatory and certification bodies	Formal meetings; continuous dialogue
Unions	Continuous dialogue between the HR department and the Unions
Public administration	Formal, continuous dialogue

The impact CEME has on its stakeholders largely depends on the Group's financial performance and economic results. The following table shows the direct and indirect economic impact that CEME has on its key stakeholders through the distribution of the value generated directly by its daily activities.[4]

[4] In 2018 and 2019, no community investment was recorded.

MATERIALITY ANALYSIS

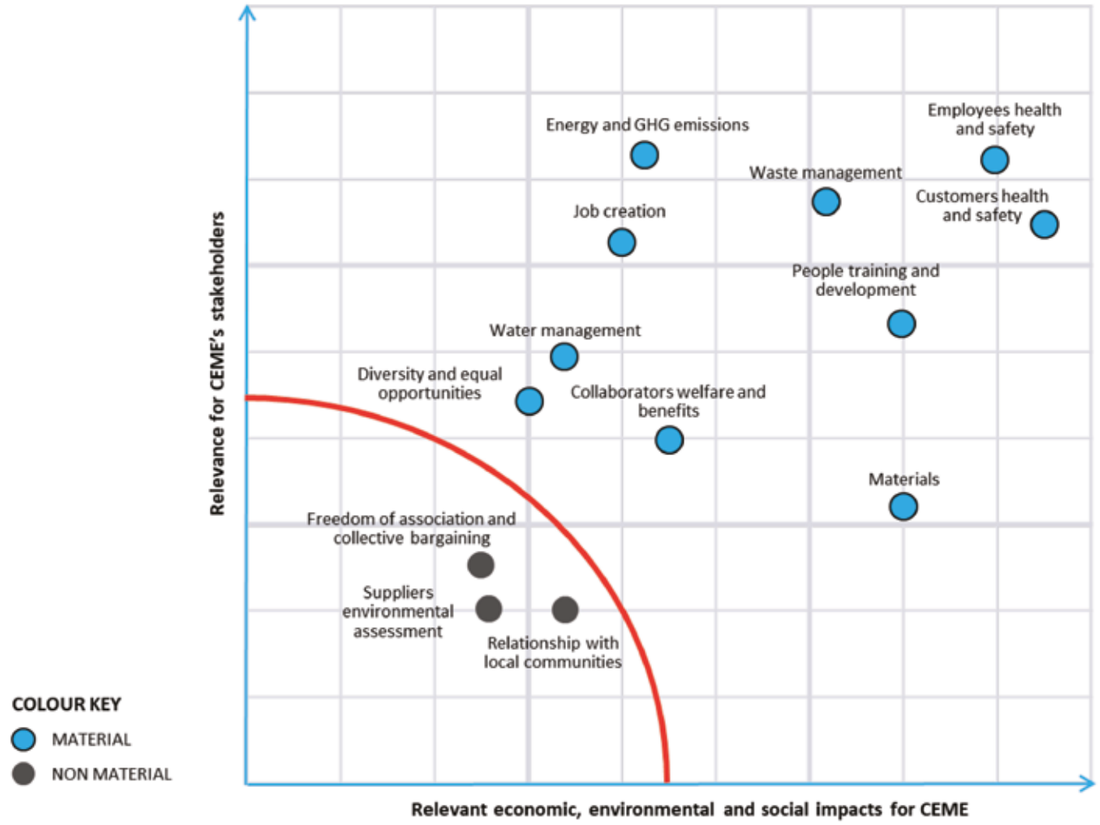
A further step in the definition of the Sustainability Progress Report content is a materiality analysis, which has been carried out in order to map the relevant topics that reflect CEME's economic, environmental and social impacts and that may influence the decisions of the key stakeholders identified.
A benchmarking analysis on the Group's reference sector and on best practices in sustainability reporting has been carried out. In addition, a Company management meeting was scheduled with the aim of evaluating the results of the materiality analysis and of weighting possible changes and updates in terms of topics' relevance and priority.
This phase was performed taking into account different sources of information:

- The GRI Sustainability Reporting Standards;
- Actual or potential requests from clients;
- Results of a sector-specific media analysis, which included news about CEME;
- The Regulatory framework.

CEME's management discussion highlighted the importance, for the Group, of the topics "Suppliers environmental assessment" and "Relationship with local communities". However, these were not among the most relevant topics for the stakeholders, as the context analysis revealed.

Furthermore, in defining the material issues, the following aspects are considered to be operating preconditions and are thus excluded from the materiality matrix:

- Respect for human rights;
- Fight against corruption;
- Regulatory compliance;
- Customer privacy.



UNITED NATIONS GLOBAL COMPACT

The United Nations Global Compact (UNGC) is a voluntary initiative based on CEO commitments to implement universal sustainability principles and to undertake partnerships in support of UN goals. The ten principles address the areas of human rights, labor, the environment and anti-corruption. In April 2020, CEME adhered to the UNGC with signatory engagement tier.

At present, CEME's 2019 Sustainability Report does not directly address the UNGC issues and principles related to Human Rights, since the majority of the Group's direct activities and suppliers are located in Europe, where Human Rights are regulated by law.
As for Zhongshan, the Group's Code of Ethics directly applies to the Chinese plant practices as well. In addition, some of the most important human rights issues related to the Group's activity, such as occupational health and safety, are already included among the "Labor" principles and issues the Company is reporting on.
An integral part of the UNGC commitment is to take concrete action and be an active supporter of the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development — adopted by world leaders in September 2015.
The SDGs aim to end poverty and other deprivations, develop strategies that improve health and education, reduce inequality and spur economic growth, while tackling climate change and working to preserve oceans and forests. Starting with its first Sustainability Progress Report, CEME has identified four SDGs which it commits to contribute to through its activities and initiatives. The Group's selected SDGs are highlighted in the figure below.

SAFETY AT THE BASIS OF QUALITY

With over 40 years of experience, CEME is able to meet the different needs and expectations of its clients. We constantly work to deliver top quality, innovative fluid control solutions, fostering continuous technological improvement in our processes.

***Simone Calvi,** Quality & HSE Director*

VERTICAL CONTROL

CEME's ability to stand out in the solenoid pumps and valves market is principally due to the combination of the Group's technical and engineering know-how, top-quality materials carefully procured from certified suppliers and flexibility in developing innovative solutions for national and international clients.
Attention to product quality is a key aspect of CEME commitment towards sustainability: it aims to establish long-lasting relationships with clients, inspired by mutual trust and collaboration, and to manage the production process in a responsible way. CEME pursues its objectives by combining the utmost attention to client safety and dedication to continuous technological improvement in its processes.

CEME PRODUCTS

Year after year, CEME has diversified its range of products and their possible applications, thereby enriching its portfolio of solutions. In 2019, CEME produced more than 50 product series, divided into six main categories suitable for different uses and client needs:

SOLENOID VALVES

CEME valves are suitable for managing different elements such as water, steam, air, refrigerants and oils. Solenoid valves are used to open and close paths, thanks to the combination of a twofold, essential system: an electromagnet and a valve body that offers several ways to regulate flow.

SOLENOID PUMPS

CEME pumps are composed of different materials and have different dimensions, providing compact solutions for high flow rate and low-pressure applications. Solenoid pumps are used mainly in household devices, such as steam irons and coffee machines. Nonetheless, they are also suitable for dealing with both water and highly viscous fluids for many different applications in medical and refrigeration systems. Solenoid pumps include high pressure and vibration pumps.

PERIPHERAL PUMPS

Peripheral pumps are principally used in cooling and re-circulation systems. They are suitable for use with water and chemically non-abrasive fluids. Some CEME models falling within this category are fully compatible with drinking water and are ideal for usage in reverse osmosis depuration systems and in espresso coffee machines, as well as for industrial purposes, with the capacity to reach high flow rates with relatively small engines.

SAFETY VALVES

Safety valves have been engineered mainly for home ironing and professional ironing systems. They are suitable for water, steam and air. CEME diaphragm safety valves have been designed in order to integrate a special device into common safety valves to prevent potentially dangerous failures when the pressure grows.

TRANSDUCERS

Transducers generate a signal that is directly proportional to the pressure applied and thus can be used in various applications, such as beverage and heating.

PRESSURE SWITCHES

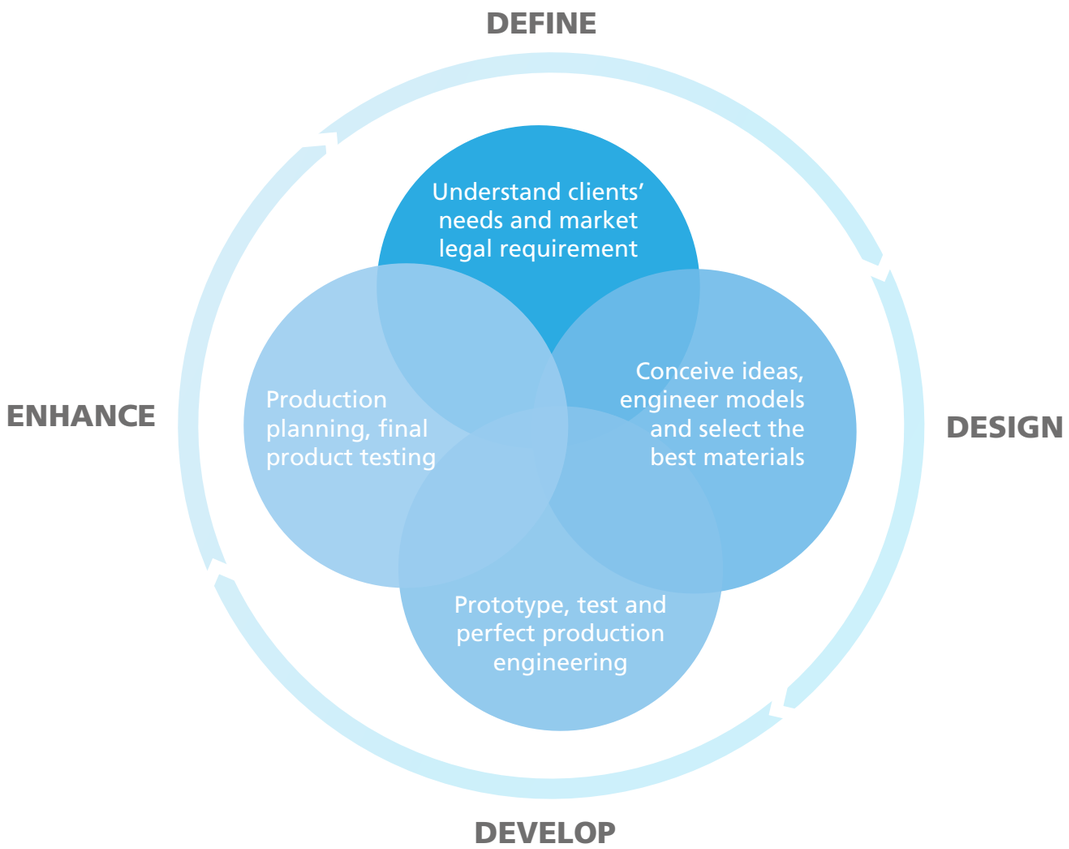
Pressure switches are used mainly for boilers, flatirons, small home appliances, air conditioners and cooling systems. They are compatible with several types of gaseous or liquid elements with a maximum temperature of 155°C.

QUALITY AND SAFETY

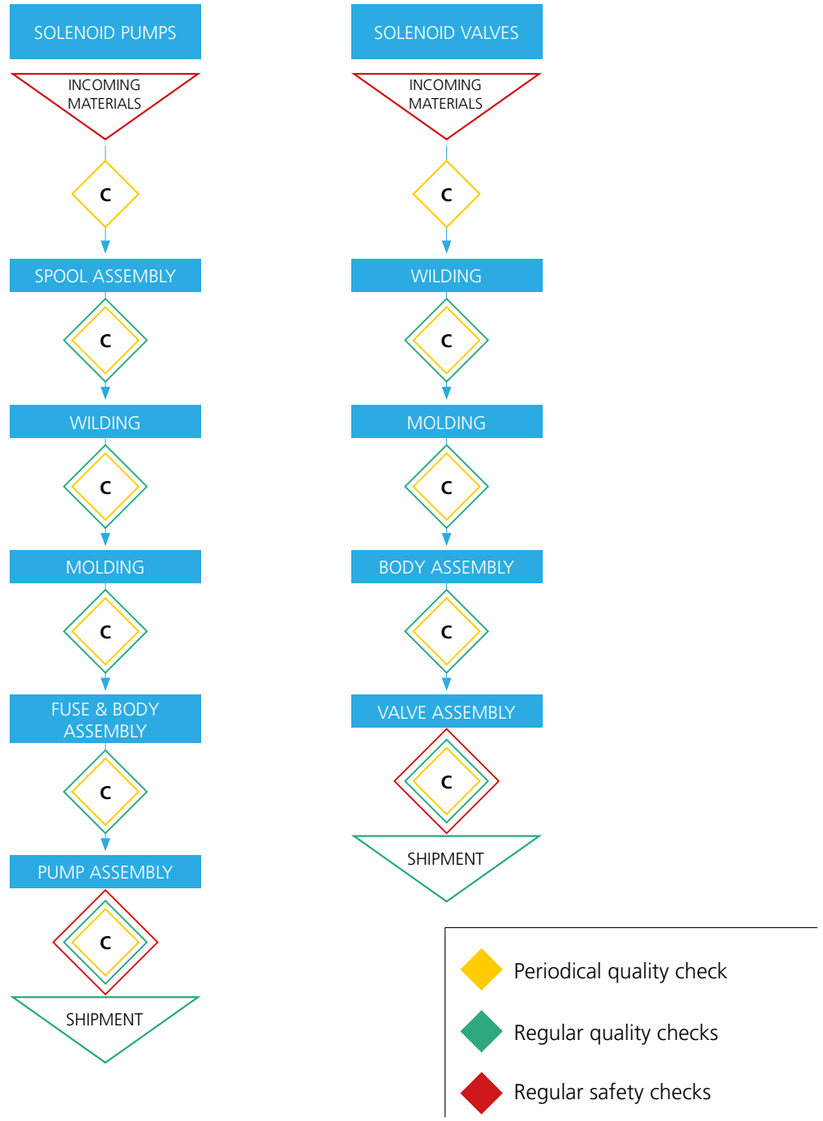
The continuous quest for quality is one of CEME's gold standards. Indeed, ensuring top product quality is an indispensable criterion for maintaining market dominance. Over the years, the Group has developed complete and meticulous quality control procedures that allow the checking of all the production phases and delivery of the best product quality to its clients.

CEME products are designed, engineered and realized almost completely within the Group's perimeter. The machining of raw materials (such as steel and brass) is concentrated in the Tarquinia plant while assembly takes place in Trivolzio. The Zhongshan site, on the other hand, deals with both production and assembly activities, thus emerging as a potentially independent facility as far as satisfaction of market demands is concerned. Thus, production verticalization allows the Group to control product quality and safety in every phase of the process.

All production steps are automatically controlled with the use of statistical software and data archives that enable the operators to seamlessly monitor processes. Products are also checked by CEME Quality Department internal audits. Quality is an intrinsic feature of CEME project development systems, which can be summarized as a circle made up of four distinctive steps: define, design, develop and enhance.



The CEME set of tests includes a variety of visual, dimensional, mechanical, chemical, physical and functional checks that can be divided in two main groups: regular checks carried out on 100% of production, including safety and quality controls; and periodical quality checks, whose frequency depends on clients' needs and normative compliance, along with CEME's 40+ years' experience.



Additionally, in 2019 CEME developed a system that allows the testing of the control devices themselves along the production process in order to guarantee top quality standards not only for products, but for internal control systems as well. The company has in fact introduced certified sample products that are tested on a daily basis.
Finally, the CEME Quality Department carries out safety controls on product electrical features and performs several other inspections before shipping, including visual controls, maximum flow, maximum pressure, as well as labelling and packaging conformity checks.

A natural consequence of the Group's attention to quality matters is safety. CEME products are carefully evaluated for possible impact on clients' safety. The highest risks occur during the installation of CEME products in final goods destined for the market.
They include electric shock, moving parts and sharp parts, and their use in combination with flammable gases or in high-pressure conditions.
CEME products are also suitable for the control of drinking water and beverages: for this reason, CEME evaluates the possible risks connected to end customer health and safety, in compliance with food contact materials (FCM) protocols. Out of the six product categories in CEME's portfolio, four are evaluated for possible impacts on client and customer safety: they include solenoid valves, solenoid pumps, peripheral pumps and safety valves and are assessed in terms of electrical security and food contact safety.

FOOD CONTACT MATERIALS (FCM)

CEME strongly believes that product safety is key to client satisfaction, as it constitutes a fundamental element in the delivery of top-quality solutions. CEME products are conceived to control and manage any type of fluid, including beverages and drinking water. In particular, the ULKA division's solenoid pumps and valves are designed for use with the best coffee machines and, together with a wide range of products such as pressure switches and flow meters, they are also suitable for vending machines and the beverage sector. As a result, CEME is required to abide by specific security protocols in order to guarantee Food Contact Materials (FCMs) compliance under national and international laws while ensuring product safety for final users.

CEME relies on external quality consultants who help the Group evaluate and implement new compliance obligations that impact on product characteristics and materials procurement. Attention is given to the selection of the materials used in the production of food contact elements. To this end, CEME asks its suppliers to issue an FCM conformity declaration. Furthermore, the Company relies on external laboratories that check the material composition and assess material specific migration rates whenever the supplier's declaration is not available.

In accordance with clients' needs and based on its 40+ years of experience, every two years CEME performs overall and specific migration tests, in order to quantify the transfer of chemical substances from FCM to food. Extraordinary tests are performed when new materials or suppliers are introduced or if an update in landmark legislation enters into force. Finally, CEME releases a declaration of food contact conformity for each of its products falling within FCM requirements. The declaration includes the product registration number, the supplier's registration number and the general and specific regulations the item complies with.

CEME has also drafted a Good Manufacturing Practice manual (GMP) in order to ensure that products are produced and controlled according to food contact material quality standards. The document covers all aspects of production, from materials procurement to staff training on production practices and personal hygiene. The manual identifies the production phases where FCM requirements apply and analyzes the possible related risks. Specific areas of the Group's plants have been assigned to FCM product manufacturing: in these zones, specific rules and protocols have been put in place in order to guarantee compliance with all applicable requirements and ensure the highest product safety.

Testing pumps

As has already been noted, the production of top-quality valves, pumps and pressure switches is directed at satisfying demand from clients all around the world and it is thus subject to a multitude of different requirements and laws. For this reason, CEME products are engineered and built in compliance with the most important national and international standards. In addition to internal tests and assessments on product quality and safety, regular controls are also carried out by several external certification bodies, which contributes to guaranteeing compliance with international quality standards.

RELATIONS WITH CERTIFICATION BODIES	CERTIFIED PRODUCTS
VDE Product electrical conformity and safety in Europe	Solenoid pumps Solenoid valves
UL Electrical component safety in USA and Canada	Solenoid pumps Solenoid valves
CSA Product conformity for flammable gas use in USA	Solenoid valves
CE GAS Product conformity for flammable gas use in Europe	Solenoid valves
IMQ Product electrical conformity and safety in Europe	Solenoid pumps Pressure switches
NSF Product conformity for food and drinking water contact in USA	Solenoid pumps Solenoid valves
ACS Product conformity for drinking water contact in France	Solenoid valves

In 2019, CEME achieved ISO 9001:2015 Quality Management System certification, which is validated by independent third parties and covers the engineering and production processes in all the Group's operational plants. Full implementation of the Quality Management System is the key to meeting all regulatory requirements and standards. CEME's commitment to product quality and safety is attested by the positive results of client audits, which require continuous improvement and the conservation of top-quality standards. Thanks to this engagement, CEME can count on stable and long-lasting relationships with some of the world's largest brands across all the reference market segments. The effectiveness of the Group's Quality Management System led to the absence of non-compliance issues with regulations concerning health and safety impacts in 2018 and 2019.

RESEARCH AND DEVELOPMENT

CEME Research and Development department is constantly working to find innovative and hyper-customized solutions for fluid control systems. In particular, the Group's R&D Department is divided into two principal areas: Advanced R&D, involved in the continuous improvement of the CEME product portfolio, develops new solutions to respond to new market demands; the second area is dedicated to the satisfaction of clients' needs, working in close connection with them to define tailor-made specifics and production processes.

CHOOSING QUALITY MATERIALS

> *The selection of the best quality materials is the first fundamental step towards guaranteeing the highest performances for our products and standing out in the solenoid pumps and valves market.*
>
> ***Pierluigi Zampese**, Sales and Marketing Director*

In order to always guarantee the best product quality, CEME carefully selects the materials and semi-finished products needed in the production process.

In 2018 and 2019, the materials purchased included mainly steel, copper and brass, representing more than 50% of the total purchased weight combined. In particular, steel is the primary material used by the Company (26% of the total weight): it is purchased in bars that are processed in the Tarquinia plant.
CEME makes use of two different kinds of steel, ferritic steel (97% of total steel weight in 2019) and austenitic steel: these are able to satisfy different technical requirements of CEME products thanks to differences in crystalline structure and magnetic characteristics. In addition to steel, copper and brass respectively accounted for 23% and 5% of production materials in 2019. Steel, copper and brass purchased by CEME are almost always derived from the recycling of previous production scrap.

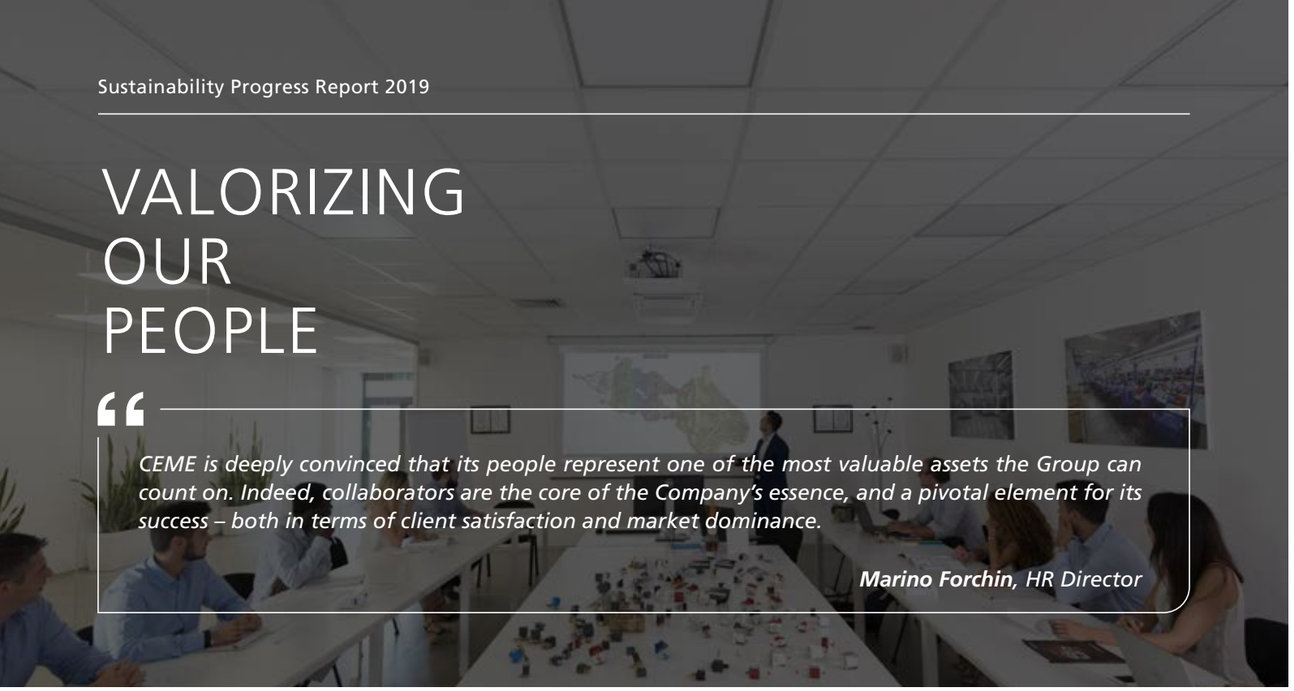
Besides raw materials, CEME buys accessory components, made up of the same main materials, but which are used less frequently or occasionally or cannot be produced internally, such as steel spring (3% of the total of purchased steel), or specific electric components like diodes. Chemical products represent 0.4% of production materials only and mainly include lubricant grease and oils, used for machinery maintenance.

CEME's packaging materials use showed quite a stable pattern in 2018 and 2019, consisting mainly of cardboard boxes: cardboard and paper represented 75% of the total packaging material weight in 2019, while wood and plastic amounted respectively to 23% and 2%.

CEME uses reusable packaging, such as plastic trays, for products internal movement or for semi-finished products that are delivered to third-party for the final assembly. Recently, the Group started to use reusable packaging for the product delivery to a selected client. The long-lasting relationships that CEME tends to develop with its clients and suppliers will be a key point for the introduction of reusable packaging with a higher number of clients in the next years.

CEME attention to the sustainable use of resources led to the choice of purchasing paper and cardboard packaging with FSC[5] Mix and FSC Recycled certifications, in full compliance with food industry requirements. FSC Mix certification attests that products are made with wood from certified forests, meaning forests managed in a way that preserves biological diversity and benefits the lives of local people and workers. Similarly, the FSC Recycled label certifies that all the wood or paper in the products comes from reclaimed or re-used materials.

[5] The Forest Stewardship Council (FSC) is an international Non-Governmental Organization. The certification aims at ensure correct forest management and the traceability of related products. For further details, please visit https://fsc.org/en/fsc-labels.



VALORIZING OUR PEOPLE

CEME is deeply convinced that its people represent one of the most valuable assets the Group can count on. Indeed, collaborators are the core of the Company's essence, and a pivotal element for its success – both in terms of client satisfaction and market dominance.

***Marino Forchin**, HR Director*

EMPLOYEES AT THE CENTER

At the end of 2019, CEME had a workforce of 857 people considering the three Italian and Chinese plants, including both employees and agency workers.[6]
The figure recorded a 13% decrease with respect to the previous year-end mainly due to the discontinuation of agency workers. This latter figure stems from the coherent choice made by the Group management to rely on internal staff and competences to carry out daily activities.

CEME WORKFORCE

WORKFORCE (EMPLOYEE CATEGORY AND GENDER)

	UoM	2018	2019
Employees	n.	847	857
Male	n.	391	426
Female	n.	456	431
Agency workers	n.	140	0
Male	n.	86	0
Female	n.	54	0
Total	**n.**	**987**	**857**
Male	n.	477	426
Female	n.	510	431

As the table shows, employee numbers underwent a slight annual increase and in 2019 perfectly coincided with the absolute totality of the CEME workforce. They are located mainly in the three operating plants of Trivolzio (Italy), Tarquinia (Italy) and Zhongshan (China) and make up 99% of the Group's overall labor force at consolidated level.[7] Furthermore, the Company's personnel is split into two almost identical parts, with a slight majority of women over men. Diversity and equal opportunities have always been among CEME's priorities: as a consequence, the Group is committed to creating an inclusive working environment in which its employees are treated the same way, regardless of gender or other individual differences.

In more detail, CEME largely prefers Full-Time over Part-Time contracts, with a division of 99% to 1% in 2019 – a pattern that shows considerable stability from one year to the other. The majority of the Company's personnel is permanently employed, acknowledging a growing trend with respect to 2018: permanent contract in facts increased by 14% annually, reaching a share of 62% of all contracts at Group level (55% in 2018). On the contrary, temporary contracts decreased by 15% on a yearly basis. As for gender, in 2019 female employment showed a greater increase in new permanent contracts (15%) and a bigger decrease in temporary contracts (-18%) than male hires (respectively 14% and -6%) with respect to 2018.

EMPLOYEES (CONTRACT TYPE, FULL-TIME AND PART-TIME, CATEGORY, AGE AND GENDER)

	UoM	2018	2019
Contract type			
Permanent	**n.**	**464**	**531**
Male	n.	289	330
Female	n.	175	201
Temporary	**n.**	**383**	**326**
Male	n.	102	96
Female	n.	281	230
Full-Time and Part-Time			
Full-Time	%	99%	99%
Part-Time	%	1%	1%
Category			
Executives	%	1%	1%
Managers	%	2%	3%
White collars	%	16%	16%
Blue collars	%	81%	80%
Age			
<30 years	%	22%	19%
30 ≤ x ≤ 50 years	%	66%	66%
> 50 years	%	12%	15%

The vast majority of the CEME population falls into the blue-collar cluster, followed by office workers, managers and executives – a pyramidal structure that traditionally witnesses stability from one year to the other. This aspect is mainly due to the labor intensiveness of the production of the Group's renowned electro-pumps and electro-valves, together with the high level of integration and internalization of competences in all the manufacturing phases. To conclude, the Group's personnel is relatively young, with over 8 out of 10 people under 50 years of age (19% under 30 and 66% between 30 and 50) and only 15% over 50. The trend does not show noteworthy differences from 2018 to 2019.

[6] No interns were recorded in 2018 and 2019.
[7] CEME additionally employed 2 people in its Hong Kong office, and 5 people in its Cleveland, US warehouse.

HIRING AND TURNOVER RATES

As for hires and terminations, the table shows a decisive downward trend for both the former and the latter. In particular, total hires decreased by 43% with respect to 2018 – with peaks concerning women (-51%) and workers under 30 years of age (-48%) – while terminations decreased by 25%.

HIRES AND TERMINATIONS

	UoM	2018	2019
Hires	**n.**	**349**	**200**
Male	n.	138	97
Female	n.	211	103
<30 years	n.	169	87
30 ≤ x ≤ 50 years	n.	166	99
> 50 years	n.	14	14
Employee hiring rate	%	36%	23%
Terminations	**n.**	**254**	**190**
Male	n.	73	62
Female	n.	181	128
<30 years	n.	116	91
30 ≤ x ≤ 50 years	n.	124	91
> 50 years	n.	14	8
Employee turnover rate	%	26%	22%

Accordingly, the hiring rate, calculated as the ratio between the total number of hires and the total number of employees at the end of the reporting period, followed a downward annual trend, standing at 23% in 2019 against 36% in 2018. The turnover rate – the ratio between the number of terminations and the overall employees – decreased to 22% in 2019 against 26% in 2018.

CEME's personnel turnover shows quite a stable pattern in Tarquinia, since it is one of the biggest production plants in the center of Italy, and the most important in the Viterbo province as far as labor attraction is concerned. Furthermore, and to confirm its territorial weight, around 70% of the plant's employees reside in Tarquinia. Thus, the high hiring and turnover rates emerging from the table are mainly due to the Northern Italian and Chinese plants. In particular, a natural renewal of CEME's employee population is taking place in Trivolzio, driven by the migration towards plant consolidation in Trivolzio – a process that was formally concluded in 2017 but whose consequences are still incomplete. A further effect can be traced to the outcomes of the ongoing transition towards cutting-edge technology and automation processes in Trivolzio.

INVESTING IN OUR PEOPLE

EMPLOYEE TRAINING

CEME believes that training represents one of the best assets to guarantee legislative compliance and to ensure the highest levels of quality and safety along the production process. In this sense, training programs are structured in a way to give all the employees the most suitable level of knowledge required by their role and competences. Thus, almost all courses deal with technical matters as required by law and are delivered by CEME teachers – a choice that takes advantage of and draws directly from the Group's human capital, thus valorizing internal skills and expertise. The Trivolzio site has a dedicated training room featuring all the components of CEME products that are used as samples during training classes. Furthermore, language classes give the Company's people the chance to improve their English, from starters to advanced learners. Although no contract clauses concerning human rights are currently foreseen and no activities were assessed on this topic, 68 employees attended courses in 2018 concerning human rights safeguards, for a total of 218 training hours.

TRAINING

	UoM	2018	2019
Training hours	**hours**	**4,237**	**3,485**
Male	hours	2,603	2,549
Female	hours	1,634	936
Training on Health & Safety topics	hours	1,307	1,125
Average training hours			
Male	hours	6,7	6,0
Female	hours	3,6	2,2
Executives	hours	12,8	0,8
Managers	hours	26,3	11,2
White collars	hours	15,6	6,3
Blue collars	hours	2,1	3,3

A decrease in terms of both training hours provided and average training hours per employee category and gender – calculated as the ratio between the number of training hours provided per category and gender, and the total number of employees per category and gender group – is acknowledged from 2018 to 2019. For the coming years, CEME is considering expanding the offer of training opportunities for its people in order to increase its ability to meet its employees' professional and personal needs in a dynamic and complete manner. One of the projects CEME has been working on for the last few years is the development and implementation of a management system that leverages Talentia software: the aim is to map the Company's know-how and competences through an annual evaluation process. By doing so, CEME aims to foster the highest levels of quality and commitment through the identification of strong points and improvement areas. The project is in the finalization phase and could be inaugurated between 2020 and 2021.

WELFARE

Corporate welfare is one of the means with which CEME pursues the aim of building a positive workplace environment where its people can fulfil their potential. CEME intends to focus attention on its employees in order to valorize their activities, fully aware that a positive balance between work and workers' personal needs is essential to unleash the full expression of their skills. Therefore, the Company undertook a process of identification and promotion of innovative designed to increase the purchasing power of individuals' and family's income. Stemming from the Group's awareness and aiming to help its people reconcile their private and working lives, in 2018 CEME introduced a web platform-based welfare plan for all employees in Trivolzio and Tarquinia.
The scheme makes goods and services available in the form of flexible benefits. As a way to engage its people at all levels, the welfare value in Trivolzio is provided as a performance bonus: thus, it is tied to corporate revenue targets. In Tarquinia, however, the welfare amount is fixed and is given once a year as a Christmas gift.

The Italian welfare plan is integrated by additional benefit measures, such as those required by national law, and specific ones that target all permanent employees, with differences depending on contract levels: life insurance, healthcare assistance, disability and invalidity insurance, meal vouchers, canteen services and fiscal assistance in agreement with an external provider. Moreover, the Company offers facilitated access to healthcare services through the Metasalute web portal. Things differ for the Zhongshan plant, where the State's public social insurance covers all the areas mentioned for the Italian sites: the benefits are delivered to all employees – both permanent and temporary – with the exception of Part-Time workers who are entitled to disability and invalidity cover only.

COLLECTIVE BARGAINING

The totality of CEME employees in all the three production plants of Trivolzio, Tarquinia and Zhongshan are covered by collective bargaining agreements. Furthermore, since 2016 the Group's Italian sites are covered by a second level contract integrating the national agreement already in force. The contract allows for better regulation of the employment relationship, guaranteeing adequate labor protection and essential flexibility for the Company.

PROMOTING A SAFE WORK ENVIRONMENT

For CEME, the health and safety of its people is paramount. H&S matters are dealt with at Regional level: both Italian and Chinese plants can count on established practices, policies and management systems that guarantee full compliance with local legislative requirements.
As provided by law, in the Trivolzio and Tarquinia sites health and safety topics are subject to the direct and structured involvement of different functions at all levels of the Company's organizational chart: specific competences and responsibilities over the application of safety procedures are attributed to them and updated through regular training sessions. Risk assessment is the core of H&S management: in full compliance with local laws, health and safety managers, or equivalent, hold inspections and consult employees in order to anticipate risks, assess them and propose all the necessary prevention efforts.
The same procedure has been implemented as far as work-related injuries are concerned. As regards health and safety issues, employees can also count on their representative, one for each of the Italian sites, who attends regular internal meetings with management. Furthermore, integration with the unions on this issue actively helps prevent any whistleblowing-related repercussions on health and safety matters.

A doctor for each Italian plant is there as an integral part of all H&S procedures, as required by law.

The Zhongshan plant relies on a legally certified third party to take care of occupational assessments concerning H&S risks. On an annual basis, consultants release a risk assessment report: this is fundamentally important for the identification of potentially dangerous situations, and the consequent drafting of mitigation and prevention measures. Together with daily monitoring of employees' health and safety and the presence of a doctor onsite, CEME China provides important on-the-job H&S training to its people.

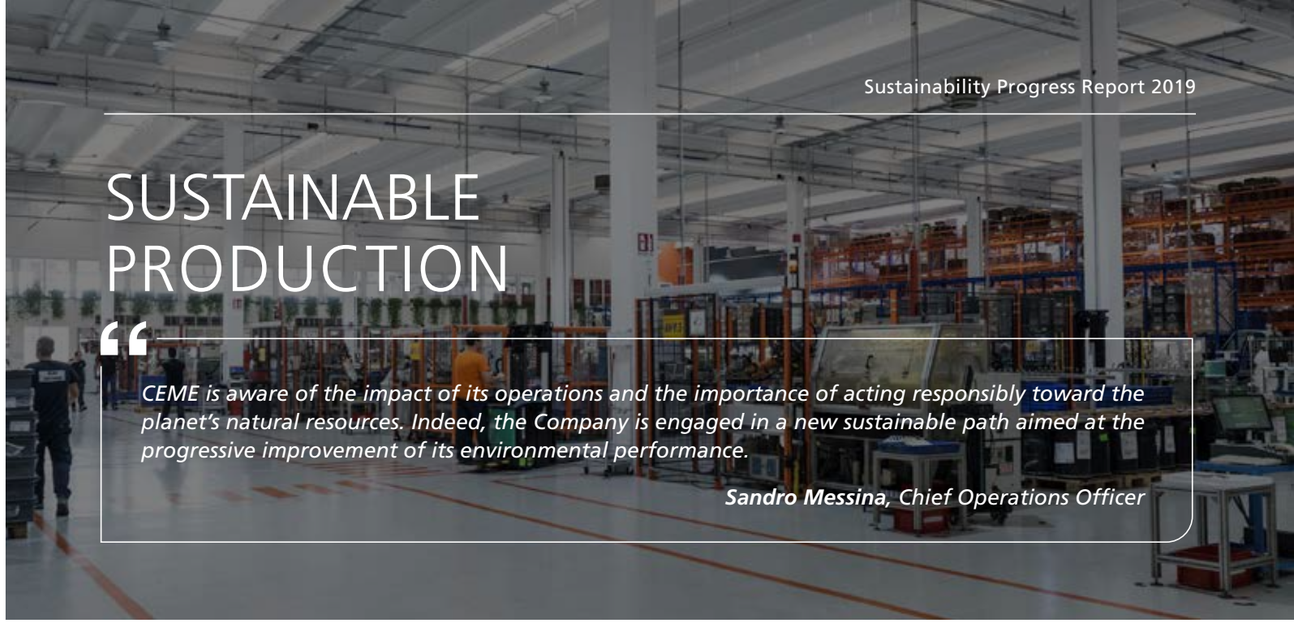
The main risk factors identified will differ according to the nature of the activities carried out. As regards the plants in Tarquinia and Zhongshan, they include, among others, cuts, bruises, crushing, and lifting and handling of heavy weights. In the more automated, assembly-focused Trivolzio site, load handling and repeated movements are the main risks.

For the coming years, CEME is considering developing and implementing a no-smoking campaign, along with a healthy eating promotion effort through the substitution of junk food with healthy options from snack machines.

THE RESPONSE TO THE COVID-19 PANDEMIC

The outbreak of the Coronavirus pandemic in the first half of 2020 has indirectly affected CEME's business. This said, the plants of Trivolzio and Tarquinia did not fall within the scope of economic activities suspended by the Italian Government in the first week of March 2020, since the Group belongs to a selection of specific supply chain branches whose continued operation was directly requested.
For its part, the Zhongshan plant remained closed from January 18th until February 17th, 2020.
The Group implemented advanced security measures, such as thermoscanners and PPE from the outset – even before the Italian Government made them obligatory – in order to give prior and due protection to its people. Along with this and the fostering of smart working for white collars, managers and executives, a COVID-19 specific healthcare insurance scheme was offered to all employees for the whole duration of 2020. With the aim of sustaining its employees in moments of need, CEME introduced threefold coverage in the event of contagion: hospitalization compensation, convalescence compensation and post-hospitalization assistance.
CEME's prompt response with the introduction of security measures enabled the Company to face the emergency by protecting the health of employees and ensuring business continuity.

[8] The reported data refers to the three operational plants of Trivolzio, Tarquinia and Zhongshan.
[9] Calculated as the total number of injuries multiplied by 200,000 and divided by the overall number of hours worked in the reporting period.



SUSTAINABLE PRODUCTION

> *CEME is aware of the impact of its operations and the importance of acting responsibly toward the planet's natural resources. Indeed, the Company is engaged in a new sustainable path aimed at the progressive improvement of its environmental performance.*
>
> ***Sandro Messina**, Chief Operations Officer*

CEME is conscious of the effect that its activities have on society and the environment, and of the importance of implementing solutions to reduce its footprint. Therefore, the Company is committed to a better understanding of how environmental sustainability relates to its daily activities and to the development of ad hoc management strategies able to deliver concrete results. This approach is tightly intertwined with the Group's practice towards modernization and efficiency enhancement in its plants, carried out with progressive, carefully selected actions.

From an environmental perspective, the Company strives to guarantee full compliance with all applicable laws and regulations in its three production plants: no incidents of environmental non-compliance have been recorded in the last two years.[10]
In this regard, CEME has implemented an ISO 14001:2015 certified Environmental Management System that covers the Trivolzio, Tarquinia and Zhongshan sites: the standard sets out the requirements for managing environmental aspects within the Company.

OUR CARBON FOOTPRINT

CEME is engaged in the progressive improvement of its environmental performance, raising awareness on the impact of its activities, including along its value chain.
The new path that led to the first Sustainability Progress Report starts from the continuous collection of data concerning energy consumption, Greenhouse Gas emissions, water consumption and waste management. The monitoring of these key performance indicators will allow the Company to identify opportunities for improvement.

ENERGY CONSUMPTION

Energy consumption is one of the most important priorities for CEME: in compliance with Italian national requirements, the Group carried out an energy audit in the Trivolzio and Tarquinia plants in order to raise awareness on energy consumption patterns and with the objective of identifying saving opportunities.
As a result, the Company in recent years started to rationalize its consumption through specific initiatives aimed at enhancing energy efficiency. In particular, in 2019 conventional lamps in Trivolzio production areas were replaced with LEDs. Furthermore, CEME constantly invests in production machinery renewal in order to optimize manufacturing processes, thus guaranteeing the best product quality while increasing energy efficiency.

Total energy consumption remained broadly constant over 2018 and 2019. Electricity represents 85% of overall consumption: much of it is absorbed by production processes, such as the use of machines, in the Tarquinia production site (accounting for 58% of CEME total electricity consumption).
Other relevant energy vectors are natural gas (8% of overall energy consumption in 2019), diesel and gasoline used by the car fleet (6%), diesel used by emergency generators (less than 1%) and LPG (2% of overall energy consumption in 2019). In particular, the primary source of thermal energy in the Tarquinia plant is LPG, whose consumption increased by 57% annually due mainly to the installation, at the beginning of 2019, of a second fuel tank to power the heating generator for new production lines. In Trivolzio and Zhongshan, the primary thermal source is natural gas. Additionally, the heat from the air compressor systems in the new Trivolzio HQ production lines is recycled and used in the plant's offices.

[10] In 2019, CEME identified a groundwater contamination issue in the neighboring areas of the Tarquinia plant, caused by a site's solvent spillage in the past. Therefore, CEME is implementing a remediation plan: the installation of Pump and Treat wells in 2019 and a bioremediation treatment process to be carried out in the next 4 years are the main actions for the recovery of the contaminated area.

ENERGY CONSUMPTION

	UoM	2018	2019
Electricity	GJ	57,872	60,025
Natural gas for heating purposes	GJ	5,950	5,311
Diesel for car fleet	GJ	3,988	3,567
LPG for heating purposes	GJ	671	1,053
Gasoline for car fleet	GJ	667	761
Diesel for emergency generators	GJ	2	2
Total energy consumption	**GJ**	**69,150**	**70,719**

GHG EMISSIONS

In line with its new sustainability commitment, CEME discloses the Greenhouse Gas (GHG) emissions from its activities. In accordance with the GHG Protocol Corporate Accounting and Reporting Standard, the Company reports all the relevant direct GHG emissions (Scope 1), indirect emissions from electricity purchased from the national grid (Scope 2) and a first selection of indirect emissions occurring outside the Company (Scope 3).

GHG Scope 2 emissions have been calculated both with the location-based and market-based methods. The first one reflects the average emission intensity of grids, while the second reflects emissions from the electricity source the Group has purposefully chosen.

Scope 1 (which includes emissions from refrigerant gas refills and fuel consumption for heating, car fleet and emergency generators) and Scope 2 emissions (location-based method) slightly increased from 2018 to 2019 and, mirroring the energy consumption trend, rose from a total of 7,565 to 7,919 tons of CO2eq combined (+5%).
Scope 3 emissions (including emissions from business travel by air, train and short-term leased cars, and from outbound truck, air and ship logistics) decreased by 21% annually, mainly as a result of a reduction in outbound air logistics. The overall trend of GHG emissions is broadly constant over the reporting period, recording a slight decrease of 1%.

GHG EMISSIONS

	UoM	2018	2019
Direct emissions (Scope 1)	**tCO_{2eq}**	**948**	**975**
Natural gas for heating purposes	tCO_{2eq}	345	306
Diesel for car fleet	tCO_{2eq}	298	266
Refrigerant gas refills for air-conditioning systems	tCO_{2eq}	215	282
LPG for heating purposes	tCO_{2eq}	43	67
Gasoline for car fleet	tCO_{2eq}	47	54
Diesel for emergency generators	**tCO_{2eq}**	**0,1**	**0,1**
Indirect emissions (Scope 2) - Location based method	**tCO_2**	**6,617**	**6,943**
Indirect Emissions (Scope 2) - Market based method	**tCO_{2eq}**	**8,137**	**8,580**
Other indirect Emissions (Scope 3)	**tCO_{2eq}**	**2,179**	**1,715**
Transportation of sold goods	tCO_{2eq}	2,054	1,625
Business travel (by air, train and car)	tCO_{2eq}	125	91
Total (Scope 1 + 2 + 3) – Location based method	**tCO_{2eq}**	**9,744**	**9,634**

RESPONSIBLE RESOURCE MANAGEMENT

WASTE MANAGEMENT & RECYCLING

CEME manages waste production and disposal in full compliance with all national applicable requirements and with ISO 14001:2015 standards. In the Zhongshan plant, waste is entirely handled by a certified third-party collector that deals with waste separation, recycling and disposal.

The Company's waste production derives mainly from production processes, as they include both hazardous and non-hazardous waste, the vast majority of which belongs to the latter cluster (95% in 2019). Recycled waste witnessed a broadly stable trend between 2018 and 2019, amounting to 34% out of the total waste weight in 2019. In the Trivolzio HQs, waste production is mainly from valve and pump assembly processes and packaging materials: the recycled waste share peaked at 64% in 2019.

CEME is engaged in progressively reducing the volume of waste and in increasing the percentage of recycled waste over total weight disposed. To this end, the company has installed two waste compactors for cardboard and mixed packaging in the Trivolzio plant, thus leading to a reduction of trash volumes. Finally, in compliance with national law requirements, the Company is engaged with certified third parties for the recovery and the reuse of production metal scraps (including steel, copper and brass) in the turnery process.

FROM STEEL SCRAP TO OIL REDUCTION

TIn the Tarquinia production site, steel scraps from production processes are recovered and turned into steel briquettes, thanks to a combined system of centrifuge and hydraulic press. Furthermore, the oils used in the machinery are recovered through a high level-filtration system that makes fluids available for reuse by removing impurities.

The combination of a steel scrap press and oil filtration allows the company to reduce the production of waste, thus enhancing reuse of materials and reducing operating costs.

WASTE (DISPOSAL METHOD)

	UoM	2018	2019
Hazardous waste	**ton**	**186**	**156**
Recycled	ton	14	0,2
Landfilled or incinerated	ton	172	156
Non-Hazardous waste	**ton**	**3,034**	**3,064**
Recycled	ton	1,205	1,103
Landfilled or incinerated	ton	1,829	1,961
Total	**ton**	**3,220**	**3,220**

WATER CONSUMPTION

Apart from civil use in office buildings and in sanitization procedures, CEME water consumption is mainly attributable to manufacturing processes in the Tarquinia plant and, to a lesser extent, to the hydraulic performance testing of finished products in Trivolzio and Zhongshan.
In 2019, the total water consumed by CEME Italian plants amounted to 6,100 cubic meters. The water used by the Company is drawn mainly from municipal utilities. However, at the end of 2018 CEME acquired a well in Tarquinia and started to progressively replace municipal water for production processes with ground water (it still constitutes 33% of the overall water consumed).

WATER WITHDRAWAL[11]

	UoM	2018	2019
Ground water	m^3	120	2,019
Third-party water (Municipality)	m^3	7,641	4,081
Total	**m^3**	**7,761**	**6,100**

As has already been mentioned, CEME makes use of water drawn from municipal aqueducts to test its pumps and valves. However, in order to guarantee the best testing conditions and to comply with FCM best practices, the water is treated through a process of reverse osmosis.[12]

CEME has two internal water treatment plants, located in Trivolzio and Zhongshan: in particular, the Trivolzio water treatment plant is entirely made of plastic and stainless steel in order to prevent any possible product contamination by ferric oxide.[13]

WATER MANAGEMENT VALVES

CEME products are designed to manage several types of fluids, especially water. The company pays the utmost attention to its products' environmental efficiency, in terms of both energy and water saving. In particular, the CEME Research and Development department works to develop new product series that allow the efficient management of water and the fulfilment of new market and customer needs. For instance, CEME has engineered a series of innovative valves aimed at the sanitary market and suitable for electronically controlled sanitary fittings (such as flush toilette systems or public faucets).

[11] I Water withdrawal data refer to CEME Italian plants (Trivolzio and Tarquinia).

[12] Reverse osmosis is a desalinization mechanism based on physical separation of water-dissolved minerals.

[13] The water treatment comprises several progressive phases, including chemical filtration with hypochlorite addition, activated carbon filtering, physical filtering with two-dimensional net (25 µm and 50 µm), reverse osmosis to reduce water hardness and final treatment with UV lamp.

METHODOLOGICAL NOTE

CEME's first Sustainability Progress Report has been prepared with reference to the GRI Sustainability Reporting Standards. The content of the report reflects the results of the materiality analysis as described in detail in the paragraph "Materiality analysis" (see Introduction). As a signatory to the United Nations Global Compact (UNGC) Initiative since April 2020, CEME, through this Sustainability Progress Report, fulfills its commitment to produce a Communication on Progress – a public disclosure outlining its progress in implementing the principles of the UNGC.
The UNGC Principles are clearly mapped against the GRI indicators in the GRI Content Index.

SCOPE OF REPORTING

This document includes a description of initiatives and activities carried out from January 1st to December 31st 2019 as well as the related key performance indicators, presented for the 2018-2019 period, where available. The information refers to CEME S.p.A and includes the Company's Headquarters in Trivolzio (Pavia, Italy), and the production sites in Tarquinia (Viterbo, Italy) and Zhongshan (Guangdong, China). Exceptions to this scope are explicitly reported in the text. Furthermore, the present Progress Report includes a brief note about the Covid-19 pandemic, a significant event that flared up at the beginning of 2020 and has affected the Group's usual business activity.

The plants falling within the reporting scope are located in:
- Trivolzio, Viale dell'Industria 6, 27020 Pavia, Italy;
- Tarquinia, Via R. Sanzio 34, 01016 Viterbo, Italy;
- Zhongshan, Industrial Road 38, 528415 Guangdong Province, China.

TOPIC BOUNDARY

The following table provides the link between CEME material aspects and the corresponding GRI Standards topics. The scope and any eventual limitation concerning the reporting boundary due to the unavailability of data and information on the external perimeter are duly specified. In the coming years, CEME is committed to gradually extending the scope of data collection and reporting for each material topic.

Material aspects	GRI Standards topics	Aspect boundary		Limitations of reporting on boundary	
		Within the organization	Outside the organization	Within the organization	Outside the organization
Collaborators welfare and benefits	Employment	CEME	-	-	-
Customer health and safety	Customer health and safety	CEME	Clients	-	Reporting scope not extended to clients
Diversity and equal opportunities	Diversity and equal opportunity	CEME	-	-	-
Employee health and safety	Occupational health and safety	CEME	Suppliers	-	Reporting scope not extended to suppliers
Energy and GHG emissions	Energy	CEME	Suppliers	-	Reporting scope not extended to suppliers
	Emissions				
Job creation	Employment	CEME	-	-	-
Materials	Materials	CEME	Suppliers	-	Reporting scope not extended to suppliers
People training and development	Training and education	CEME	-	-	-
Waste management	Effluents and waste	CEME	Suppliers	-	Reporting scope not extended to suppliers
Water management	Water and effluents	CEME	Suppliers	-	Reporting scope not extended to suppliers

QUALITY REPORTING PRINCIPLES

CEME's first Sustainability Progress Report is drafted in accordance with the principles of balance, comparability, accuracy, timeliness, clarity and reliability, as defined by the GRI Standards. The document highlights both strengths and weaknesses, as well as potential areas of improvement for the Group.
The data collection and reporting process are structured to ensure comparability over the years and the correct interpretation of information by the key stakeholders interested in CEME's performance evolution. Furthermore, and as far as the precautionary principle is concerned, a risk-opportunity approach for the management system is applied. The present Sustainability Progress Report is not subject to external assurance.

CALCULATION METHODOLOGIES

Methodologies and assumptions used to calculate performance indicators included in this report are reported below:

- All data related to injuries refer to CEME employees, thus excluding contractors. First-aid cases and commuting injuries for which transportation has not been organized by the Company are not included.
- Where environmental data has not been available, conservative estimates have been used, resulting in the underestimation of CEME's environmental performance.
- The total recycled waste of the Italian plants has been determined based on disposal methods and waste weights as reported in the Environmental Declaration Form (Modello Unico di Dichiarazione Ambientale).
- The energy consumption of the Company's owned and long-term leased vehicles has been calculated starting from available fuel consumption data.

The following table shows the conversion factors that have been used:

Diesel and Gasoline Fuel density (liter/ton) Calorific Value (GJ/ton)	UK Department of Environment, Food & Rural Affairs (DEFRA), Conversion factors - Full set, 2018, 2019 Italian Ministry for Environment, Tabella parametri standard nazionali, 2018, 2019.

- The energy consumption of the Company's heating system has been calculated starting from natural gas and LPG available consumption data. The following table shows the conversion factors that have been used:

Natural gas Calorific Value (GJ/1000 Stm^3)	Italian Ministry for Environment, Tabella parametri standard nazionali, 2018, 2019.
LPG Calorific Value (GJ/ton) Density (l/ton)	UK Department of Environment, Food & Rural Affairs (DEFRA), Conversion factors - Full set, 2018, 2019

- Greenhouse Gas emissions calculations are carried out based on the principles outlined in the GHG Protocol Corporate Accounting and Reporting Standard.
Scope 2 emissions resulting from the consumption of electricity purchased from the national grid are calculated according to two different methodologies: the location-based method reflects the average emissions intensity of grids where the energy consumption occurs; the market-based approach reflects the emissions from the electricity source that the Company has purposefully chosen. For the Zhongshan plant, Scope 2 market-based emissions have been calculated using the location-based energy mix coefficient.
Scope 3 emissions estimates include indirect emissions resulting from outbound logistics and business travels by car, air and train. Outbound logistics distances have been calculated by considering all the shipments of sold products from Trivolzio and Zhongshan sites to clients. The calculation does not take into account intercompany and spare parts shipments.
As regards 2018 business travel by air, the unavailability of data related to the last quarter of the year means that the calculations include an estimate based on the travel in the same period of 2019.

In detail, CEME's GHG Emissions have been calculated as follows:

GHG EMISSIONS, SCOPE 1

Source	Activity data	Emission factor	Global Warming Potential (GWP)
Natural gas for heating	Fuel consumption	UK Department of Environment, Food & Rural Affairs (DEFRA), Conversion factors - Full set, 2018, 2019	CO_2 equivalent emissions were considered
LPG for heating			
Diesel and gasoline for car fleet			
Diesel for emergency generators			
Refill of refrigerant gases of air-conditioning	Leakages	-	Global Warming Potentials (GWPs) are taken from IPCC Fifth Assessment Report (AR5)

GHG EMISSIONS, SCOPE 2

Source	Activity data	Emission factor	Global Warming Potential (GWP)
Location-based method			
Electricity purchased from the national grid	Electricity consumption	Terna, Confronti internazionali, 2017, 2018	Only CO_2 emissions were considered
Market-based method			
Electricity purchased from the national grid	Electricity consumption	Europe - AIB, European Residual Mixes, 2017, 2018	CO_2 equivalent emissions were considered
		Terna, Confronti internazionali, 2017, 2018	Only CO_2 emissions were considered

GHG EMISSIONS, SCOPE 3

Source	Activity data	Emission factor	Global Warming Potential (GWP)
Business travel by car and air	Kilometers travelled	UK Department of Environment, Food & Rural Affairs (DEFRA), Conversion factors - Full set, 2018, 2019	CO_2equivalent emissions were considered
Business travel by train	Kilometers travelled	Ferrovie dello Stato Italiane, "Rapporto di Sostenibilità", 2017, 2018	CO_2 equivalent emissions have been considered
Outbound logistics	Kilometers covered by air, truck or ship multiplied by shipped weight (ton)	UK Department of Environment, Food & Rural Affairs (DEFRA), Conversion factors - Full set, 2018, 2019	CO_2 equivalent emissions were considered

GRI DISCLOSURES

The material of the present Sustainability Progress Report references the following GRI Disclosures. If not otherwise specified, the Disclosures applied have been used in full.

GRI Standard	Disclosure	Notes
GRI 102 General Disclosures (2016)	102-1 Name of the organization	
	102-2 Activities, brands, products, and services	
	102-3 Location of headquarters	
	102-4 Location of operations	
	102-5 Ownership and legal form	
	102-7 Scale of the organization	
	102-8 Information on employees and other workers	
	102-9 Supply chain	
	102-10 Significant changes to the organization and its supply chain	No significant changes to the organization's size, structure, or supply chain were recorded in the reporting period.
	102-11 Precautionary Principle or approach	
	102-12 External initiatives	
	102-14 Statement from senior decision-maker	
	102-18 Governance structure	No committee responsible for decision-making on economic, environmental, and social topics is foreseen to date.
	102-40 List of stakeholder groups	
	102-41 Collective bargaining agreements	
	102-42 Identifying and selecting stakeholders	
	102-46 Defining report content and topic Boundaries	
	102-47 List of material topics	
	102-48 Restatements of information	The 2019 Sustainability Progress Report is the Company's first document of its kind.
	102-49 Changes in reporting	The 2019 Sustainability Progress Report is the Company's first document of its kind.
	102-50 Reporting period	
	102-51 Date of most recent report	The 2019 Sustainability Progress Report is the Company's first document of its kind.
	102-52 Reporting cycle	The data collection process and the report publication activities are structured on an annual basis.
	102-53 Contact point for questions regarding the report	
	102-56 External assurance	

GRI Standard	Disclosure
Economic performance	
GRI 201 – Economic performance (2016)	201-1 Direct economic value generated and distributed
Procurement practices	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
GRI 204 – Procurement practices (2016)	204-1 Proportion of spending on local suppliers
Anti-corruption	
GRI 205 – Anti-corruption (2016)	205-3: Confirmed incidents of corruption and actions taken
Materials	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
GRI 301 – Materials (2016)	301-1 Materials used by weight or volume
Energy	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
GRI 302 – Energy (2016)	302-1 Energy consumption within the organization
Water and effluents	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
GRI 303 - Water and effluents (2018)	303-3 Water withdrawal
Emissions	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
	305-1 Direct (Scope 1) GHG emissions
GRI 305 – Emissions (2016)	305-2 Energy indirect (Scope 2) GHG emissions
	305-3 Other indirect (Scope 3) GHG emissions
Effluents and waste	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
	306-2 Waste by type and disposal method
GRI 306 – Effluents and waste (2016)	306-2 Waste by type and disposal method

GRI Standard	Disclosure
Environmental compliance	
GRI 103 – Management approach (2016)	103-2 The management approach and its components
GRI 307 – Environmental compliance (2016)	307-1 Non-compliance with environmental laws and regulation
Employment	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
GRI 401 – Employment (2016)	401-1 New employee hires and employee turnover
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees
Occupational Health and Safety	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
GRI 403 – Occupational Health and Safety (2018)	403-1 Occupational Health and safety management system
	403-2 Hazard identification, risk assessment, and incident investigation
	403-3 Occupational health services
	403-4 Worker participation, consultation, and communication on occupational health and safety
	403-5 Worker training on occupational health and safety
	403-6 Promotion of worker health
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships
	403-9 Work-related injuries
Training and education	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
GRI 404 – Training and education (2016)	404-1 Average hours of training per year per employee
Human Rights Assessment	
GRI 412 – Human Rights Assessment (2016)	412-1 Operations that have been subject to human rights reviews or impact assessments
Customer health and safety	
GRI 103 – Management approach (2016)	103-1 Explanation of the material topic and its Boundary
	103-2 The management approach and its components
GRI 416 – Customer health and safety (2016)	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services

GRI Standard	Disclosure
Customer Privacy	
GRI 418 – Customer Privacy (2016)	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data
Socioeconomic Compliance	
GRI 419 – Socioeconomic Compliance (2016)	419-1 Non-compliance with laws and regulations in the social and economic area

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