



An Oerlikon
Company

2018 DRIVING PERFECTION

Sustainability Report



One team, One vision.

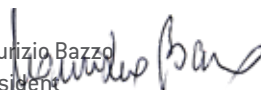
2018 has been a very challenging year in our industry and the overall automotive sector. Uncertainty on the global direction of the car industry has slowed down the launch of new models, affecting the moulding companies and consequently the hot runner utilization. In this uncertain market German car companies showed a very unclear direction on the future of internal combustion cars, the push of the Volkswagen group towards electrification is not matched by BMW or Daimler, nor to say any other global carmaker. Duties and tariffs have added further uncertainty on where to manufacture new cars. As a consequence, 2018 has seen a drop by almost 20% versus 2017 in new car launches, and this directly affected our market.

Despite all of the above, HRS and the INglass Group were able to grow also in 2018, taking away market share from our main competitors and further establishing the company as a strong market leader in the hot runner industry for the automotive industry. Strong determination, aggressive commercial activity and industrial cost optimization have made this possible. These key elements, together with passion, product, teamship and partnership with the main customers, have led the INglass group to grow in a year in which every other company struggled. With a CAGR (2015-2018) equal to approximately 15%, the ambitious strategy undertaken by the company is confirmed: to establish itself as a worldwide leader and strengthen its position in a highly competitive sector and at the same time consolidating its economic and financial parameters. In 2018 the company pushed even further the "One Team" project, aligning all the subsidiaries to common goals in performance, profit and individual targets: everybody in all the group companies is fighting for a common target in sales, profitability and financial position. In all geographical areas, while maintaining a local management of resources, in order to best serve the customers in the specific area, every manager is working to bring the best to other markets. During 2018 the shifting of tool making has favoured the Chinese market, due to the constant search by Tier 1 of better pricing; our international team has aligned to this trend and in all the European and North American territories we are pushing to serve our direct and indirect customers with the best offers from our Chinese factory when required to do so. 2018 was a year marked by important transformations in our industry and INglass was able to align to these needs: for the first year our Chinese factory output bypassed the Italian one and the future will see more and more international projects made in China. The price

pressure is increasing in all the territories and thanks to INglass three factories we are able to decide which one is more suitable to answer to our clients needs.

Due to the dynamics of the car industry we are also increasingly looking at other sectors: during 2018 we launched an international project aimed at competing in the domestic appliances, houseware, logistic and transportation sectors. INglass already has the technical knowledge to cover these sectors, we need to build up the commercial structure and the clients' confidence in our products: during 2018 we hired sales professionals in US, Spain and Brazil to be able to gain fast knowledge of these industries, we created a specific business unit focused on non-auto applications. 2018 also saw new products and technologies in our portfolio aimed to complete our offer and competitiveness. During 2018, as we did in previous years, we invested in our professional team: attention to the team and to professional growth is at the centre of all company processes. The core principles of excellence, continuous improvement and flexibility are constantly incentivized through training, and reallocation of professionals in different territories and tasks. Our glocal approach also continued to bear results: global processes and procedures, global training, global product and standards, with a local approach to customers and solutions. Product quality, cutting edge technology, service and customer partnership are the winning elements of INglass, during 2018 we also added a very aggressive commercial approach combined with continuous cost optimization: price pressure and commercial programs were more than sustained by industrial and product improvements. As a result, in a market which saw the average price drop down by 15% our industrial margin has improved, and this has allowed the company to reach another great year in our financials. The automotive industry is facing the same challenges in 2019, amplified by less cars in development and even more price pressure; in this challenging environment INglass is ready to play a major role in 2019 and for the years to come: the desire to face new challenges is what has always distinguished us, the courage to change is part of our DNA and during the coming years this will allow us to be able to compete and win.

Maurizio Bazzo
President



Report structure & group perimeter

The scope of our 2018 Sustainability Report includes the entire Group of companies reporting to the Italian HQ and those that fall within the Group Consolidated Results. All figures, therefore, refer to production plants in Italy, China and the USA and to the technical-commercial branches worldwide.

PERIMETER 1: as usual, the Economic section, from Chapter 2.1 to 2.6 included, as well as turnover and global market data by area and by division, report weighted data on the actual percentage held, in order to guarantee a perfect alignment with the Consolidated Financial Statement.

PERIMETER 2: all other report indicators referring to the entire company (production plants and technical-commercial branches) are not weighted by the percentage held, since we believe the statistical data relative to personnel, customers and any environmental impact must be considered in its entirety. The Group will take into consideration the entire impact of its activities, acting in effect as a single body and not as the sum of its individual entities.

We represent that, with the exception of the SCC branches in Spain, SCCA in Portugal and HRS in Thailand (held by INglass SpA at 50%, 50% and 49%) and the production plant in Michigan, USA (49% held by Simest Spa), all other sites are wholly owned by the parent company INglass Spa (with the percentage held varying from 100% to 99%, depending on the case).

The data reported in this document refers to the turnover from the years 2016, 2017 and 2018.

PERIMETER 1 OF THE REPORT

Economic Sustainability 2018

Weighted data for the % withheld

INGlass SPA				
HRSflow Hot Runner Systems NA Inc. Canada	INGlass USA Inc. Usa	INGlass Tooling & Hot Runner Manufacturing Co.,Ltd China	Sistemas De Canal Caliente Iberica S.L. Spain	HRSflow do Brasil comércio de sistemas de câmara quente importação e exportação LTDA Brazil
HRS GmbH Vertrieb Deutschland Germany	HRS USA Inc. Usa	INGlass HRS South Africa (Pty) Ltd. South Africa	SCC Assistencia Tecnica Unipessoal Lda. Portugal	INGlass HRS MAKINE KALIP YEDEK PARÇA VE SERVIS SAN. TIC. LTD. Turkey
HRS Hong Kong Limited Hong Kong	HRS JAPAN CO. LTD Japan	HRS FLOW INDIA Private Limited India	HRS FRANCE SARL France	HRS Flow (Thailand) Co. Ltd, Thailand
HRS FLOW MEXICO Mexico				

PERIMETER 2 OF THE REPORT

Social and Environmental Sustainability 2018

Overall data

INGlass SPA				
HRSflow Hot Runner Systems NA Inc. Canada	INGlass USA Inc. Usa	INGlass Tooling & Hot Runner Manufacturing Co.,Ltd China	Sistemas De Canal Caliente Iberica S.L. Spain	HRSflow do Brasil comércio de sistemas de câmara quente importação e exportação LTDA Brazil
HRS GmbH Vertrieb Deutschland Germany	HRS USA Inc. Usa	INGlass HRS South Africa (Pty) Ltd. South Africa	SCC Assistencia Tecnica Unipessoal Lda. Portugal	INGlass HRS MAKINE KALIP YEDEK PARÇA VE SERVIS SAN. TIC. LTD. Turkey
HRS Hong Kong Limited Hong Kong	HRS JAPAN CO. LTD Japan	HRS FLOW INDIA Private Limited India	HRS FRANCE SARL France	HRS Flow (Thailand) Co. Ltd, Thailand
HRS FLOW MEXICO Mexico				

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What is the Company's history, its structure, its products and its values, and who are its stakeholders?


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43 Chapter 03. Social sustainability

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COMPANY IDENTITY



1.1 / In Brief



INglass S.p.A.
San Polo di Piave
1987

Company type SPA – Public limited company

Registered capital 2.750.000,00 € fully paid up

Directors
Chairman & Executive Director: Mr. Maurizio Bazzo
CEO: Mr. Antonio Bortuzzo
Executive Director: Mr. Ruben Vidotto
Director: Mr. Stephan Berz
Director: Mr. Osvaldo Carloni
Director: Mr. Ruggero Morandini
Director: Mr. Javier Ribes Pelegri
Director: Mr. Andrea Peruch

Controlling authorities

BOARD OF STATUTORY AUDITORS

Chairman of Statutory Auditors: Ms. Biscaro Antonietta
Standing Auditors: Ms. Petrin Francesca, Mr. Graziani Michele
Substitute Auditors: Ms. Filippin Laura and Ms. Serafin Michela

AUDITING COMPANY

Reconta EY Spa

Corporate Purpose

INglass, has been operating in the injection sector of thermoplastic materials for almost 30 years. It is the market leader in the automotive industry and provides not only moulds and hot runners, but also consulting engineering services to support customers from the early planning stages until mould testing as well as customer service throughout the life cycle of the product.

Registered trademarks



Registered in Italy, European Union, USA, Japan, South Korea and China



Registered in Italy, European Union, USA, Canada, Brazil and China
All registered trademarks are the exclusive property of INglass Spa, INglass Tooling & Hot Runner Manufacturing Co. Ltd and subsidiaries.

Certification

ISO9001



Total number of employees

1094

Range and product lines

The activities carried out by INglass are aimed at providing engineering services for the production of plastic products. The mold division is specialized in the design and manufacturing of molds for front and rear lighting in the Automotive sector. The HRSflow division designs and manufactures hot runner systems for the production of medium and large sized components for a wide range of applications, in particular, for automotive industry components and for applications with high production volumes and quick cycle times

MOULDS:

- Multicolour: moulds for single-mould components manufacture of multi-colour parts
- Multicomponent: moulds for single-mould manufacture of multi-material parts
- Injection compression: moulds for large surfaces to replace glass

HOT RUNNER SYSTEMS:

- Hot runner systems for large applications in the automotive sector, autonomous & electric vehicles, domestic appliances, houseware, logistics & environmental, mobility and technical applications

CONTROL UNITS

- Control units that regulate and monitor the moulding process parameters

RHEOLOGICAL ANALYSIS

- Tests carried out to study the behaviour of the material to be injected by evaluating parameters such as pressure, strain and temperature

Turnover per single product

87%

**Hot Runner Systems
 Division**

13%

**Moulds
 Division**

The company organization of the INglass Group

2018 COMPANY STRUCTURE

HOT RUNNER SYSTEMS DIVISION



AUTOMOTIVE



EXTERIOR



LIGHTING



INTERIOR



UNDERHOOD

OTHER SECTORS



DOMESTIC
APPLIANCES



TECHNICAL
APPLICATIONS



HOUSEWARE



LOGISTICS &
ENVIRONMENT

2018 was a year marked by an impressive pace of innovation in the electric, autonomous, and connected vehicle. At the same time it was a year of transition, characterized by uncertainty about the future of car models and the Countries' ability to adapt their infrastructure to this new trend. Due to the dynamics of the car industry the Company has launched an international project aimed at

competing in all the other sectors in addition to Automotive: domestic appliances, houseware, logistic and transportation sectors. The Company expanded the sales professionals in US, Spain and Brazil to be able to gain fast knowledge of these industries, we created a specific business unit focused on non-auto applications and implemented other targeted actions to increase the HRSflow brand awareness in these sectors.



MOULDS DIVISION



LIGHTING



MOBILITY



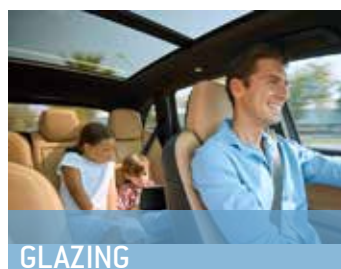
FRONT LIGHTING



REAR LIGHTING



AUTONOMOUS & ELECTRIC VEHICLES



GLAZING



INJECTION ON FILM

INglass S.p.a. worldwide

WINDSOR / CANADA



HRS Hot Runner Systems NA Inc.

2002



100% INglass S.p.a.



30 employees

GRAND RAPIDS / USA



INglass USA Inc.

2014



51% INglass S.p.a. 49% Simest



67 employees

SANTIAGO DE QUERETARO/MEXICO



HRS FLOW MEXICO, S. DE R.L. DE C.V.,

18 April 2018



100% INglass S.p.a.



7 employees

GREENVILLE SOUTH CAROLINA / USA



HRS USA Inc.

2010



100% HRS Hot Runner Systems Na Inc.



2 employees

SAN PAOLO / BRAZIL



HRSflow do Brasil comércio de sistemas de câmara quente importação e exportação LTDA

2004



99.98% INglass S.p.a. + 0.02% Maurizio Bazzo



19 employees

ALBERGARIA-A-VELHA / PORTUGAL



SCC Assistencia Tecnica Unipessoal Lda.

2008



100% Sistema de Canal Caliente Iberica S.L.



27 employees

BARCELONA / SPAIN



Sistemas De Canal Caliente Iberica S.L.Lda.

2005



50% INglass S.p.a. 50% Xavier RibesS.L.



7 employees

JOHANNESBURG / SOUTH AFRICA



INglass HRS South Africa (Pty) Ltd.

2015



100% INglass S.p.a.



2 employees

BONCHAMP LES LAVAL/France



HRS FRANCE SARL

2014



100% INglass S.p.a.



5 employees

SAN POLO DI PIAVE/Italy



INGlass S.p.a

1987

HEILSBRONN / Germany



HRS GmbH Vertrieb Deutschland

2003



100% INglass S.p.a.



19 employees

NAGOYA / Japan



HRS JAPAN CO. LTD

2015



100% INglass S.p.a.



6 employees

HANGZHOU / China



INGlass Tooling & Hot Runner
Manufacturing Co.,Ltd China

2006



100% INglass S.p.a.



368 employees

HONG KONG



HRS Hong Kong Limited

2008



100% INglass S.p.a.



2 employees

BANGKOK / Thailand



HRS Flow (Thailand) Co. Ltd

2016



49% INglass S.p.a.



1 employee

BURSA / Turkey



INGlass HRS MAKINE KALIP YEDEK PARÇA
VE SERVIS SAN. TIC. LTD.

2010



99% INglass S.p.a. 1% Ruggero Morandini



7 employees

PUNE / India



HRS FLOW INDIA Private Limited

2014



100% INglass S.p.a.



68 employees

1.2 / Mission & Vision

MISSION

Increase the value of the company by offering innovation and advanced technologies to our partners, thus allowing them to differentiate themselves in the market. INglass aims to be a reliable supplier by guaranteeing efficiency and continuity in the molding process thanks to providing quality products and the know-how to support our customers. The distinctive features of our company mission are:

INNOVATION

The experience gained in applications with a high level of complexity and continuous investment in research and development, allows us to provide technically advanced solutions for the molding process by improving efficiency and optimizing the functional requirements of the molded products. Some of the company's patented technologies (FAIL Safe, HP gate and FLEXflow) have made significant improvements in the world of injection molding.

HUMAN RESOURCES

The people who work in the INglass group have always represented the most important resource for the pursuit of company objectives. Attention to the team and to professional growth is at the center of all company processes. The core principles of responsibility, ethics, excellence, continuous improvement and flexibility are constantly reinforced through continuous training aimed at allowing the company's professionals to reach their full potential.

GLOCAL APPROACH

In order to properly respond to the needs of international partners, the company utilizes a global network in order to ensure a widespread presence on all continents, including commercial branches as well as engineering and product development centres.

The methodologies adopted in our technological approach are consistent worldwide and are integrated with a highly localized service strategy in order to meet the needs of the territory.

EXCELLENCE IN PERFORMANCE

Through leadership in innovation, enrichment of human resources and a glocal approach, the company aims to achieve the best possible results in the interest of its stakeholders and shareholders.

Continuous employment growth, return on investment in each relevant territory and the contribution to an increase

in the industrial culture, have always characterized the company.

VISION

All activities carried out by the company are aimed at the pursuit of an ambitious goal: to be recognized by its partners as worldwide leaders of high-quality products, efficient customer service (pre and after sales), and technological innovation. The project is called QSP1 - Quality, Service & Productivity Challenging Project. With this objective, since 2010 the company has invested in Business Intelligence tools typical of Industry 4.0, in the organizational structure following the concept of Lean and KPO, and in automated production, thus providing an integrated approach to serving its customers.

1.3 / Driving Values

"People are our greatest assets for realizing our inspiration"

COMMON SENSE, our compass

At INglass, our employees make rational assessments and decisions and act on the basis of experience in order to obtain positive results and minimize negative outcomes. Each person is required to be responsible for their own choices, to listen to the reasoning of others and to find a meeting point in order to act with balance and wisdom.

IMPROVEMENT, our commitment

For INglass, improvement means developing continuously on a daily basis, and in a way so that the same mistakes are never repeated. We carry out our work with passion, dedication and professional pride, which are essential ingredients to develop and improve our company. The success of INglass is the result of the commitment of employees, who are actively involved in supporting projects while always focusing on the end result and remaining fully conscious of their work.

EXCELLENCE, our passion

The concept of excellence for INglass means taking pride in doing something, doing it well, and improving it. Each person is asked to work professionally and skilfully, to care about the details, to study each action in depth, and exude a critical sensibility to achieve perfection for the task being carried out. We also focus on searching for innovative solutions and the development of specific skills, aimed at fulfilling future requests.

FLEXIBILITY, our strength

Flexibility means meeting market demands for INglass. This is carried out professionally and efficiently by working independently and adapting to current situations while moving in the same direction for the same objectives. This is translated into the ability to listen to customers and fulfil specific requirements of each project through a positive and prompt approach.



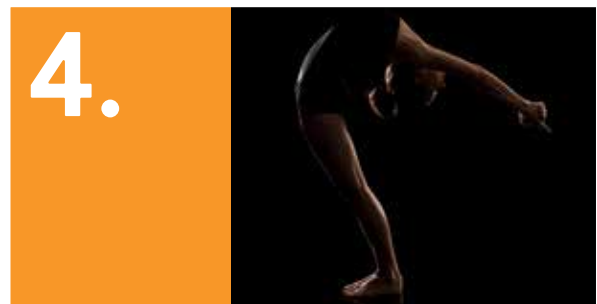
1.



2.



3.



4.

1.COMMON SENSE, OUR COMPASS

It is common sense to take a method and try it. If it fails, admit it frankly and try another. But above all, try something
Franklin Delano Roosevelt

2.IMPROVEMENT,, OUR COMMITMENT

Change does not always mean improving, but to improve we must change
Winston Churchill

3.EXCELLENCE, OUR PASSION

Strive for perfection in everything. Take the best that exists and make it better. If it doesn't exist, create it
Henry Royce

4.FLEXIBILITY, OUR STRENGTH

Logic will get you from A to B; imagination will get you everywhere,
Albert Einstein

1.4 / Organizational Model D.Legs. 231/01 & Ethic Code

In 2017, the Company launched a project, then formally approved in 2018, to adapt to the Administrative Responsibility of Corporations, with the aim of adopting an Organization, Management and Control Model (hereinafter "Model 231") according to the expected requirements provided for in art. 6 of the Legislative Decree 231/2001.

The compliance to this decree is part of a broader company policy, always careful to according to ethical principles of management and transparency towards its stakeholders, as well as for the improvement of its internal control systems.

To complete the implementation of the Model, the independent supervisory group has also planned a Training schedule for all the internal people involved in the process. This part of the project, started in 2018, will be closed within end 2019. An additional training phase, only for people directly involved into the information flow and audit process to be completed within February 2020.

1.5 / Who we are

1.5.1/HISTORY

>1987 Founded 25 years ago in a garage on the outskirts of Treviso, we began designing and manufacturing moulds for the plastic industry.

. However, we soon focused on multi- coloured and multi- component rotary moulds for car lights (lights and head/ taillights for cars), thus addressing a high- potential, yet highly selective and demanding market niche.

In **2000** we purchased A.S. (Attrezzature Speciali) [Special Equipment] in Milan, a well-known company in the hot runner manufacturing sector with over twenty years of experience in the market. With the acquisition of A.S., the **HRSflow division** (Hot Runner Solution) was founded and dedicated to designing and manufacturing hot runner systems for plastic injection moulding. A.S.'s twenty years of experience with hot runner systems, combined with the know-how of INglass in manufacturing moulds enabled the creation of a line of hot runner systems able to meet all the demands of the automotive market (not only lighting units). This strategic choice has been rewarded by excellent results in terms of turnover and international reputation.

From the experience gained over the first 15 years, and confirmed development opportunities in the field of plastic injection:

INGlass (Instead of Glass) was founded in **2004**. The company is dedicated to injection compression technology to manufacture large polycarbonate surfaces for the automotive sector (internationally recognised technology known as Plastic Glazing). This technology will be the turning point in the production of vast transparent surfaces for the automotive sector, which is intended to replace glass with polycarbonate. Initially founded as a brand in the Glazing division, INglass soon obtained such high visibility on the market that, in 2006, the company name was changed into INglass.

The complex technology and high criticality of production costs that characterise the moulding process later created the need for a high quality and reliable monitoring system. This then leads to the founding of the department dedicated to manufacturing control units able to monitor the entire

moulding process, also via remote control. Meanwhile, we proceeded to set up partnerships to provide commercial and technical support for the main markets where our customers are present.

In **2009** we decided to take on an enormous challenge in the Asian market and launched the new production plant in Hangzhou near Shanghai. The new plant, which has an overall surface area of 12,200 sq.m, 9,600 of which is dedicated to the production area, ended its first financial year (2011) with a turnover of €9 million. The plant in China manufactures and designs hot runner systems by replicating the model, technology and quality standards of the Italian parent company. It is focused on the Asian market and supplies the product to new emerging markets with high development potential, from China, to India and Vietnam.

In **2010** we further diversified our product range, introducing the Multitech line. This line is dedicated to moulding smaller, high volume production components belonging to non-automotive sectors, mainly medical/ packaging/closures, which now represent 60% of the international plastic market.

In **2011** the company started allocating significant resources and energy to simplifying processes to create automated **tools to supervise and control not only design and production departments**, but also purchasing, customer care, and on up to the sales department. This path was consolidated in 2012 with the introduction of CRM (Customer Relationship Management). The CRM software platform allows the company to keep close control of, and manage, information as well as making it available worldwide in real-time from its headquarters. This two-year period marked a turning point in the company's history and saw it restructure its organisational approach for the purpose of improving the internal structure and services offered to customers.

In **2012** the company adopted the **Lean Production** system, which is based on optimising flows, reducing waste and using proven methods to decide what really matters to contribute to the efficiency and effectiveness of the result. Manufacturing processes and product design were therefore managed in a comprehensive manner in order to minimise production complexity and optimise phases and resources used for any purpose other than those that create value for the customer.

In **2013** we launched a new product into the market: the **FLEXflow**, a patented electric drive device for precise position adjustment, acceleration, speed and end stroke. The device caters mainly to automotive applications that require class 'A' surfaces.

The year **2014** was marked by important challenges and strategic decisions for the company. On the one hand, we purchased the publicly trading French company Ermo to develop our presence in non-automotive markets, since this company has vast experience in high-precision multi-component moulding. On the other hand, we began building our third production branch in Grand Rapids, Michigan, USA. We also started designing and manufacturing moulds for the Asian market at our production plant in Hangzhou.

In the first half of **2015** the company completed the construction of its third worldwide production plant in the USA, dedicated to serving the North and South American market. In the second semester, the company's rebranding project was defined. This required a considerable image and communication coordination effort on a global scale, as evidenced with the official launch on the market in January 2016.

In **2016** INglass extended its borders by opening two new customer care centres in Mexico and Thailand. Thanks to the setting up and opening of the third production plant in Michigan in 2015, the Americas are now also served with a 360° strategy to guarantee customers uniform quality. 2016 was also the year for the market launch of the new FLEXflow One technology, the servo-controlled valve gate system that no longer requires the external central unit.

In **2017**, INglass launched the "One Team" project which aims to share strategies and objectives at all company levels and in all geographical areas, while still maintaining local management of resources to meet the needs of the territory. Furthermore, the economic and technological strength of the group in the historic business of molds and hot runner systems for the automotive industry, has allowed the company to redirect its focus to other market segments such as housewares, domestic appliances, technical applications, and logistics & environmental. Hence the decision to dismiss the French ERMO company and to discontinue the Multitech multiple-cavity line, in order to specialize even more in the medium and large components industry.

The **2018**, due to the dynamics of the car industry, the Company has launched an international project aimed at competing in all the other sectors in addition to Automotive: domestic appliances, houseware, logistic and transportation. The Company expanded the sales professionals in US, Spain and Brazil to be able to gain fast knowledge of these industries, we created a specific business unit focused on non-auto applications and implemented other targeted actions to increase the HRSflow brand awareness in these sectors.

PRODUCTION PLANTS



BRANCH OFFICES FOR TECHNICAL, SALES AND AFTER-SALES ASSISTANCE

- HRS Hot Runner Systems NA Inc. / CANADA
- HRSflow do Brasil comércio de sistemas de câmara quente importação e exportação LTDA / BRAZIL
- HRS Hong Kong Limited / HONG KONG
- HRS GmbH Vertrieb Deutschland / GERMANY
- Sistemas De Canal Caliente Iberica S.L. / SPAIN
- SCC Assistencia Tecnica Unipessoal Lda. / PORTUGAL
- INglass HRS MAKINE KALIP YEDEK PARÇA VE SERVIS SAN. TIC. LTD. / TURKEY
- HRS USA Inc. / USA
- INglass HRS South Africa (Pty) Ltd. / SOUTH AFRICA
- HRS Japan CO. LTD / JAPAN
- HRS FLOW India Private Limited / INDIA
- HRS Flow (Thailand) Co. Ltd / THAILANDIA
- HRS FRANCE SARL / FRANCE
- HRS FLOW MEXICO / MEXICO

1.5.2/CORPORATE STRUCTURE

The Italian Headquarters is organized by divisions according to main product lines. Each division has its own Head Manager, with a managerial and technical background and approach, and a team of multiple staff functions. They give support and coordinate the corresponding Departments at the company's Chinese and American plants and at the technical-commercial branches Worldwide.

1.5.3/MARKETS

The INglass group was primarily established to design and manufacture molds for the automotive sector. After several years it has developed the HRSflow division mainly focused on hot runner systems.

From its inception, in 1987, the group has recorded steady growth. From the beginning, the company pursued its way towards international expansion, opening several technical-commercial branches worldwide, as well as a production plant in China in 2009 and another one in the United States in 2015. During the 2009 global crisis the company continued to push the diversification into the hot runner market, expanding into application sectors outside of the automotive industry. The growth in the plastic know-how, in product innovation, supported by proprietary IT tools, have allowed INglass to develop its distribution and technical network with a worldwide footprint. This strategy led to an accelerated growth in the HRSflow division dedicated to hot runners, which has recorded a 16% (CAGR) between 2015-2018.

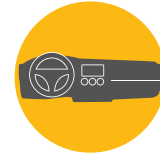
Today, company turnover is balanced globally with an historical presence in South Europe and growing market share in DACH, a strong growth in China and the Far East, and a more relevant presence in North America thanks to the recent start of local manufacturing. The strategy of becoming local in Asia and North America has played a key role in the growth of the hot runner business. INglass' HRSflow division is one of the four worldwide players competing in this industry. The local presence of both manufacturing and sales/service have allowed the company to better serve the international end-user plants adopting a g-local approach: local plants and service, global relation with OEM and end-users.

As a group we foresee global growth to continue, with a slowdown in the molding unit and a slower pace growth in the hot runner division. The automotive sector has slowed down since the start of 2018 as uncertainty prevailed, while the non-automotive sector is steady. China and the Far East will continue to grow, while North America and Europe are decreasing. Faced with these challenges, we have focused our efforts on the commercial penetration gaining market share both in automotive and non-automotive markets thanks to our sales organization, commercial programs, optimization of our manufacturing performance, attentive service and flexibility of our organization.

AUTOMOTIVE EXTERIOR



AUTOMOTIVE INTERIOR



UNDERHOOD



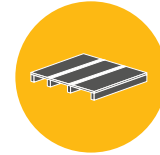
LIGHTING



TECHNICAL APPLICATIONS



LOGISTICS & ENVIRONMENTAL



DOMESTIC APPLIANCES



HOUSEWARE



MOBILITY



AUTONOMOUS & ELECTRIC VEHICLES



>> AUTOMOTIVE

The global automotive market during 2018 showed signs of slowing down: new car sales decreased in comparison to 2017 and new car models in tooling recorded a 15% drop versus 2017. The automotive market is undergoing radical shifts, that are creating a tougher economic environment. The reasons for this slowdown are related to: duties/tariffs applied or threatened from US to China/Europe, norms and regulations about car pollution that are slowing down internal combustion engine development and pushing still unprofitable electric cars, constant price pressure applied from OEMs to T1s and from these to Toolmakers. This price pressure is leading production to shift from Europe and North

America towards China. The automotive industry strongly requires global support with over 80% of all new vehicles being built on global platforms. These cars will therefore be produced with identical applications and quality standards on all continents. To meet this demand, T1 mergers are on the rise. Major players are dominating the market in all segments: interior, exterior, lighting and under the hood.

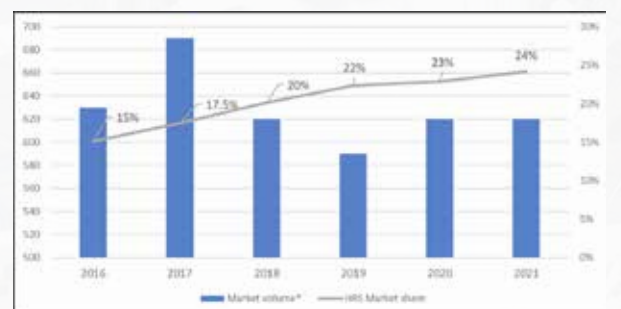
Our answer to this is continuous product innovation, local presence with global coordination, proximity to our customers both physical and economical, excellence of service, and constant product optimization and cost control.

>> **OTHER SECTORS**

Even though the automotive market is the main sector for the HRSflow division, we have implemented our knowledge to compete in new sectors, starting a new challenge for the Group: become a market leader and expand our presence in sectors as houseware, domestic appliances, technical applications, logistics and environment. Our technology is easily adaptable to these new applications, our sales organization is covering all the markets in which these products are manufactured, we are realigning our focus on this new industry with the goal of reaching a 10-15% share in our production.

HOT RUNNER SYSTEMS DIVISION

The hot runner system is one of the most critical components of injection molding. It is fully customizable based on specific plastic materials required, the shape of the piece, aesthetic requirements, and the eventual need to produce different coloured components. Due to market uncertainty and slowdown of new car models in tooling, the 2018 automotive hot runner global market presented an 10% decrease in comparison to 2017. The geographic distribution of the hot runner market is not strictly linked to the production of parts, but rather focuses on the area of injection mold production. This forces companies and their sales people to have a constantly updated global vision of the market. An analysis of the global distribution of the hot runner market shows that the largest market is located in Asia, where more than 55% of sales are concentrated and this share has been constantly increasing. The European market represents about 25% of total sales mainly in large volume systems, while America accounts for 20% of the market. The HRS division, compared to the overall market, registered a growth also in 2018, and this allowed HRS to become the second worldwide player in the automotive industry.



Here attached a graphic with HRS automotive sales in comparison with global market giving our market share

We forecast for 2019 an even more difficult year for the automotive industry with lower car tooling launches in all continents. The market uncertainty will continue and increase, car companies will need to save development costs reducing the new car models and increasing the cost pressure on all the supply chain. Despite this market situation, we plan to grow our market share thanks to our commercial actions and increased competitiveness; we also plan to continue our product optimization and manufacturing cost reduction



TURNOVER PER APPLICATION SECTORS

93%
AUTOMOTIVE

7%
OTHER SECTORS



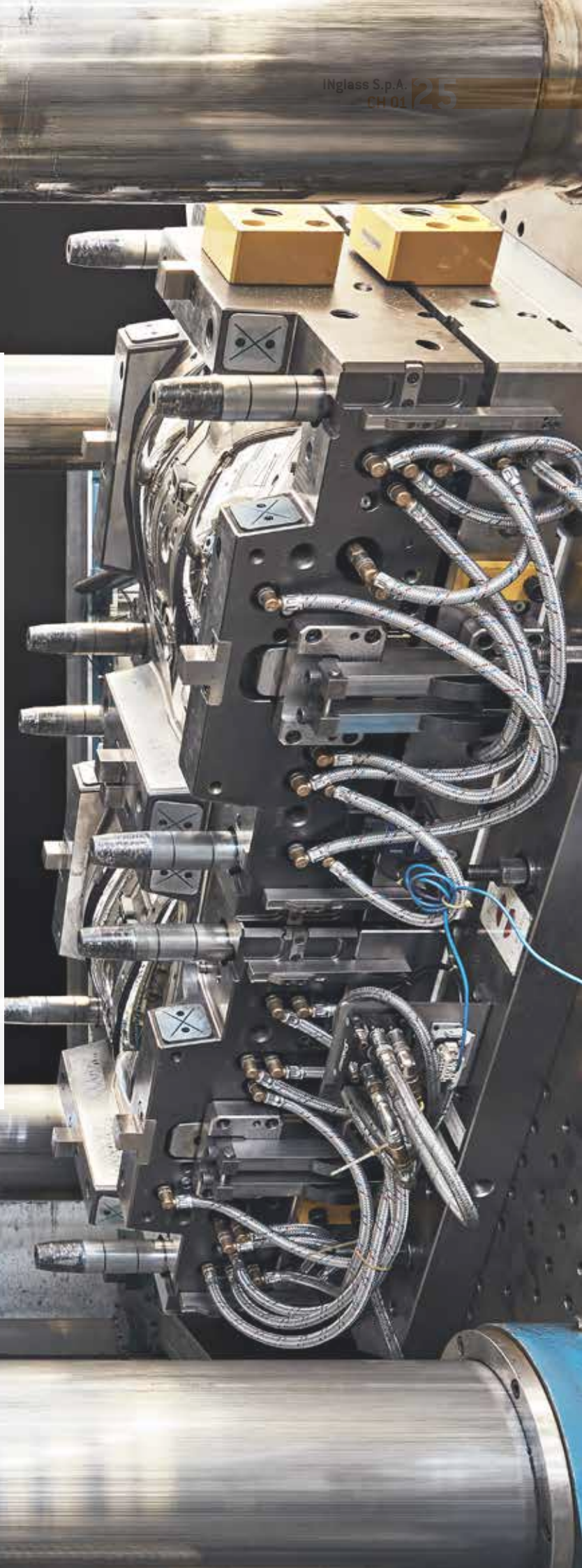
MOULDS DIVISION

The INglass mold division, based in Italy, has been operating since the end of 2017. It is a consolidated player for the production of injection molds for the automotive lighting market and for the production of large polycarbonate surfaces to replace glass (automotive glazing).

The production of injection molds in the lighting sector is traditionally dedicated to molding industries that supply components for head/rear light to automotive manufacturers. Within this market, the INglass moulds division is one of the recognized leaders in the designing and manufacturing of injection rotational and spin-form molds for multishot components, i.e., the production of plastic parts obtained by successive injection of components in different colors and materials.

The competitive scenario is characterized by considerable fragmentation in Europe: mold manufacturers have on average smaller or similar structure as INglass moulds division. China and North America are the areas with larger size mold makers.

Due to market uncertainty and slowdown of new car tooling launches, 2018 market went down by 30% in comparison to 2017. This decrease is partially due to fewer projects and is affected by a global dropdown in prices: like for like mold market price went down, on average, by 25% in comparison to 2017. This factor deeply affected marginality in the overall industry and in the Incos division. The trend for 2019 is not expected to improve, due to fewer projects in the market and a further drop down in pricing.



1.5.4/ DISTRIBUTION SYSTEM

Through our current network of sales branches and distributors we serve customers in over 50 countries. We are able to meet high market demand due to a global network that includes Europe, Asia, the Americas, Africa and Oceania with sales branches and highly specialised teams providing engineering studies, design and assistance. Our production plants in three continents help us to achieve the best lead times and to target customised product solutions. Sharing know-how and organisation methods on a global scale, thanks also to an advanced web-based platform, allows us to deliver the best possible support, regardless of the complexity of the project or its geographical location. The decision to have such a vast sales network is dictated by the conditions that have led our END USERS or OEMs (Original Equipment Manufacturers, i.e., the companies that sell the finished product, such as vehicles, furniture, furnishing and electronics, etc.) to globalise their production plants. Hot runners and moulds are assembled at the suppliers' facilities and then the same parts are produced in different countries. Since quality standards are an important value

for TIER-1 end users, suppliers, such as INglass, have had to follow them worldwide regardless of where such producers' sites may be located. This explains the widespread presence of INglass in major markets worldwide. Our sales force mainly has a technical background with in-depth experience of the specific market and other similar markets. This is due to the fact that the product is extremely technical and requires constant close relations between company and customers, starting with the product design stage. In 2016, in line with this strategy of close customer relations and providing fast expert support, we added a local site in Mexico with service technicians and a dedicated warehouse, and also consolidated our USA production site operations. In addition, in 2017 the German branch was moved from Buchschwabach to Frankfurt, a city known for being a major financial centre and an important hub for global traffic. In 2018 the company improved its activity in East Europe with a dedicated team concentrated on developing Slovenian, Croatian, Serbian, Romanian and Hungarian markets.



1.5.5 PRODUCTS AND SERVICES

PRE-SALES SERVICES

During the Research and Development phase, specific software is used to simulate the thermal, fluid dynamic and structural behavior of the systems, providing precise and scientific analysis during the engineering phase. Through this type of analysis, system temperature consistency, cycle energy consumption, pressure drops and weight balancing for each individual molded piece, are also checked. A highly qualified in-house team of experienced engineers conduct in-depth analyses and simulations of plastic material flows, in order to correctly configure the hot runner system and solve any molding problems before they occur.

In order to provide its customers with specialized support, INglass-HRSflow has allocated process experts according to areas of competence. HRSflow has also developed specific solutions for critical applications such as color change, sequential injection, and the management of highly technical materials. This enables the company to provide detailed, specific and efficient solutions.

To better support its customers by providing advanced molding solutions, the company avails itself of the innovative platform Electronic Tools Standards. This software, aimed at obtaining the most complete technical and operational information right from the initial design phases, is supported by an appropriate organizational structure in all three INglass production plants: Europe, Asia and America. Thanks to this tool, all information related to the mold, hot runner and injection press are perfectly integrated, ensuring the project conforms to mold maker standards. It also helps eliminate possible errors during budgeting and design phase, improves delivery speed and allows better flexibility in the event changes are required during manufacturing. All information can be shared by the INglass technical team, with a high level of confidence and in real time no matter where they are in the world. The presence of three different product lines (molds, hot runners and control units) makes it possible for the company to produce an end product that is the result of synergistic experience in these specific sectors, making it one of a kind on a global scale. From this point of view, it has try-out departments at the production plants in Italy, China and the USA, equipped with presses of different tonnage and highly qualified technicians who are able to test the product before it is sent to the customer. In addition, these departments are also available to customers for testing new materials or the latest cutting-edge applications.

AFTER SALES SERVICES

INglass-HRSflow, with its widespread global organization of technicians and service centers, supports its customers in the after sales phase, from installation to the end of the system's life cycle. Timeliness and quality of service are guaranteed by our web-based HELPDESK platform which manages the complete service history of every single system through its entire life cycle, and guarantees in real time the integration of all HRSflow branch service centers worldwide. Thanks to a sophisticated service call classification system, this tool allows constant monitoring of customer requests, product reliability and the quality of services offered by our service network. In the HELPDESK platform, we collect and classify all technical project details - drawings, bill-of-materials, thermal simulations and rheological analyses - all necessary to support our technicians during service interventions.

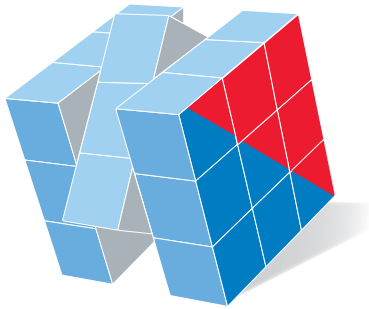
HRSflow guarantees customer support through the following services:

- System installation
- Process optimization through try-out support
- Maintenance and spare parts guaranteed for the entire operational life of installations
- Management of system modifications and/or technical upgrades per customer requests
- Scheduled maintenance programs
- Customer training in system maintenance and fine-tuning on the molding process
- Personalized strategies for spare parts to satisfy all Customer requirements

Widespread management of all service requests is guaranteed in the customer's native language by the presence of our qualified technical teams in local centers worldwide: Europe, the Americas, Asia, Oceania and some African countries. Issues can be resolved through online support and by our service technicians available 24/7. When necessary, HRSflow is able to reduce production downtime thanks to a network of spare part warehouses located in strategic local centers, as well as work centers operating 24/7 at our main production sites.

HRSflow also offers customized spare part packages, allowing the customer immediate availability of the most commonly used components. These solutions mainly consist of:

- Optimized spare parts kit supplied together with the system
- Optimized spare parts stock based on the list of installed systems in the production plant



Plastic Injection Molding Troubleshooting

THE PRODUCT

Following preliminary studies and accurate simulations carried out by in-house experts, the company offers the best technical solutions to reduce cycle times, attain high structural properties and optimise the performance of moulds and hot runner systems. Prototypes are tested on a vast range of plastic materials and subject to simulations and tests to check their behaviour during the transformation process: thermal profile studies, mechanical testing and fluid dynamics.

We were founded as a mould manufacturing company and, over the years, we have specialised in manufacturing multi-colour, multi-component injection moulds for lighting (lights and car head/tail lights) and injection compression moulds for plastic grazing applications. This technology has been a turning point in glass production for vehicles, which is destined to be replaced by large transparent surfaces in plastic.

MOULDS DIVISION MILESTONES

Multicolour, multi-component moulds

1991

- Plastic glazing moulds
- ICM Technology

2004

Foil back-injection - the process enables in one-step to back inject on a functional or decorated foil

2017

HOT RUNNERS DIVISION MILESTONES

Besides moulds, we also manufacture:

- hot runner systems:** whose main purpose is to ensure that the injected plastic material remains hot from press nozzle output to when it enters the mould cavity. The hot runner is mainly composed of an arm, which transports the plastic material from the press nozzle, and injectors used to distribute the material into the mould to produce the plastic part. What helps us stand out in our field is our ability to combine our technical expertise in hot runner systems with years of experience in manufacturing moulds.
- control units:** specific parameters such as temperature, nozzle opening and closing, energy consumption, and potential faults during the entire injection process require adjusting and monitoring. The company is equipped to supply the customer with a control unit that is essential for press operations and able to optimise hot runner performance. Furthermore, as far as the multi-impession sector is concerned, systems are usually controlled by external units since the injection press often has an insufficient number of zones to be able to cover the requested requirement due to the number of cavities present. Consequently, if the hot runner and mould are new, the supplied package will also have a control unit to make independent the mould/hot runner assembly.
- rheological analysis:** we offer our customers advanced rheological analysis to optimise system performance and process parameters for improved part quality. Thanks to the rheological analysis we support our customers by assessing with them the best conditions related to temperature, strain and pressure and the price quality. Thanks to the deep know-how on plastic materials, we carry out the material characterization analysis in order to have a global overview of the material composition and properties.

2001

Supported systems



2003

Fail-Safe technology patent for dual heaters and dual thermocouples on nozzles and manifolds



Prewired and Hot Half systems



2005

Introduction of screwed-in systems



2006

Creation of the new Diamond Line



HRS control units launched on the market



2007

SLM - Selective Laser Melting Technology to optimise mould cooling operations



2010

New MultiTech division for multi-cavity applications



2012

Lateral cylinder with no oil cooling required



2013

FLEXflow Servo-driven valve gate



2016

FLEXflow One: the servo driven valve gate system with no additional control unit required during the injection process



2017

HPgate The innovative solution suitable for direct injection on PMMA surfaces to optimize gate quality and avoid flashes



2018

HRScool: the solution for Hydraulic cylinders where water lines are not required anymore



INNOVATIONS AND TECHNOLOGIES

In 2013, the company launched the FLEXflow project: technology that marked a new era in the hot runner systems sector.

The FLEXflow system provides a servo-controlled electric drive of the valve pins, which ensures a precise control of the stroke, position and speed of each valve pin during the opening and closing phases. Thanks to these capabilities, it is possible to guarantee precise and flexible control of the pressures and flow rate of the polymer during injection molding.

The electric motors that activate the valve pins are installed in the base plate of the mold and dually connected to the standard Hot Runner system. The number and position of the units are defined by design, in relation to the position of the injection points and the mold's layout. The operation of each unit is controlled by a specially developed control unit, customized to the FLEXflow technology.

In the Automotive sector, the main applications for FLEXflow technology are, above all, in the injection molding of products with medium-large surfaces in both exterior and interior areas, for example: bumpers, spoilers, dashboards,

door panels, lenses and sunroofs. These are applications that require a high level of aesthetic quality and must be free from any surface flaws.

In terms of the process, thanks to a very broad molding window, the FLEXflow technology allows the press closing force to be adjusted, reducing it to the absolute minimum required, while at the same time guaranteeing limited deformations of the molded piece. In addition, important improvements can be achieved in regard to increasing quality and reducing rejects, thanks to the high stability and repeatability of the process.

In 2015, the FLEXflow system had already been used in more than seventy applications worldwide, which involved on the front line some of the most important OEMs and Tier1 in the Automotive sector and drew the attention of major players in the supply chain of plastic components.



FLEXflow



In 2016 the company launched the new FLEXflow One technology: the servo driven valve gate system, with a simple Driver Module that replaces the external control unit. If necessary, stroke, velocity and force of each valve pin can be adjusted by the operator thanks to a handy external interface called ESI (External Smart Interface). With the design of this new technology, the range of our electrically driven valve gate systems has been expanded – our FLEXflow Family - offering a market a new alternative to the hydraulic and pneumatic system.

In 2017, FLEXflow technology established itself in the non-automotive market, expanding its range of applications worldwide, in particular, entering the following sectors: electronics, technical applications and transportation.

In 2018 HRSflow introduced in the market HRScool, the innovative solution for hydraulic cylinders that allows to completely eliminate water cooling for the most common automotive applications. The design minimizes the heat transfer from the hot tool plate to the cylinder, while a highly thermally conductive cover maximizes heat dissipation from the cylinder to the cold clamping plate.

HRSCOOL

In 2018 HRSflow launched the new HRScool, the innovative solution for cylinders with passive cooling. The thermal insulation is optimized thanks to supporting columns with a minimal contact surface that reduces the input of heat from the hot runner to the cylinder housing. The integrated telescopic design enables maximum heat dissipation from the cylinder to the cold platen.

Benefits

- Superior thermal insulation
- No active cooling required
- Easy maintenance: no issues associated with clogged cooling circuits
- Compact solution, reduced cut out of the mold
- No degradation of the hydraulic fluid
- Optimal thermal uniformity along the hot runner system
- Bayonet lock/unlock



1.6 / Our stakeholders

In glass stakeholders are those who, in any way, shape or form, influence and are influenced by the choices the company makes. Therefore, our Stakeholders have the right to be informed regarding our organisational operations and results. They are therefore the main, even if not the sole, target of this document. Identification of our main Stakeholders has always been the first step in the preparation of our Report.

Once our main stakeholders were identified, we tried to put ourselves in their position in order to understand what information could be of greatest interest. KPI's have been thus identified and described, set out in both table and graph form to enable and improve their immediate understanding.



1.7 / Main KPIs: overview table

KEY PERFORMANCE INDICATORS (KPI)			
PERIMETER 1 *			
Financial Sustainability	Consolidated 2016	Consolidated 2017*	Consolidated 2018
Turnover	€ 140.122.000	€ 150.729.000	€ 150.244.000
Total investments	€ 14.687.000	€ 15.321.000	€ 10.019.000
Added value created	€ 58.516.000	€ 57.746.000	€ 68.264.000
PERIMETER 2 *			
Social Sustainability	Consolidated 2016	Consolidated 2017	Consolidated 2018
Employees	1.081	1.031	1.094
% permanent contracts	91%	90%	92%
% fixed term contracts	9%	10%	8%
Female employees	161	157	181
Male employees	920	874	912
Part-time employees	19	18	20
Interns and trainees hosted during the year	33	30	27
Total training hours for employees	28.000	29.560	27.500
Hours of in-house training for colleagues located abroad	3.536	3.520	10.165
Total number of accidents	16	18	25
Average no. days sick leave due to accidents	7.2	14.0	13.2
Environmental Sustainability	Consolidated 2016	Consolidated 2017	Consolidated 2018
Natural gas consumption (m3)	119.000 m3	139.161 m3	100.367 m3
Electricity consumption (kwh)	9.290.000 kwh	9.117.761 kwh	9.817.519 kwh
Steam energy consumption (GJ)	9.963 GJ	4.686 GJ	0 GJ
Water consumption	34.822 m3	29.098 m3	28.159 m3
Total waste produced	976.138 kg	884.483 kg	1.007.348 kg
% weight of hazardous waste/total waste produced and disposed of	21%	22%	21%
% weight of recyclable waste/total waste produced and disposed of	70%	68%	68%

* Data refer to Consolidated Financial Statement without the dismissed ERMO SAS

ECONOMIC SUSTAINABILITY



2.1 / Determination of Added Value

The Added Value (VA) represents the value created within the company with the resources (human, technical and financial) available.

A company's Added Value can be easily obtained reclassifying the income statement for the fiscal period of interest. Therefore, starting from the Group's Consolidated

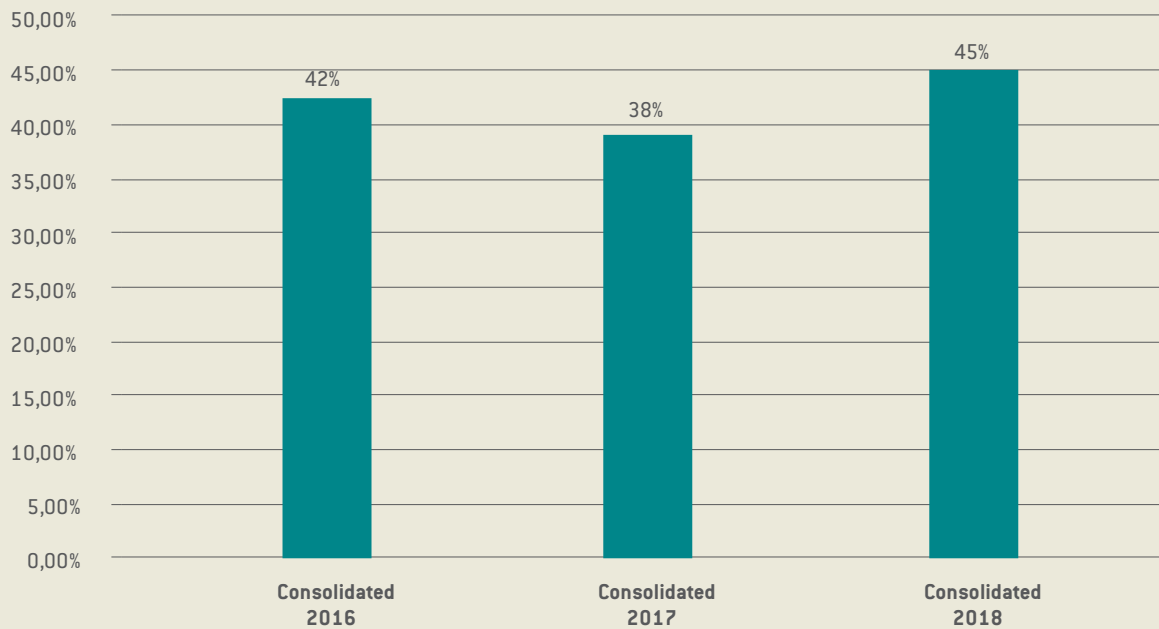
Financial Statements, prepared in compliance with the statutory regulations, and reclassifying the data in order to highlight Global Value and Intermediate Production Costs, the difference between these represents the Added Value. Following is the VA production layout in INglass Spa from 2017 (before and after Ermo dismissal) to 2018.

DETERMINATION OF ADDED VALUE*	CONSOLIDATED 2017	CONSOLIDATED 2017 (no ERMO)	CONSOLIDATED 2018
Revenues from sales and services (net of revenue adjustments)	161.896.000	150.729.000	150.224.000
Changes in inventory of work in progress, semi-finished and finished goods	204.000	113.000	-844.000
Other revenues and income	4.895.000	1.587.000	4.989.000
Revenues from core business	166.995.000	152.429.000	157.389.000
Capitalisation of long-term costs	5.035.000	4.588.000	4.311.000
GLOBAL PRODUCTION VALUE	172.030.000	157.017.000	158.700.000
INTERMEDIATE PRODUCTION COSTS	86.273.000	75.417.000	77.051.150
GROSS ADDED VALUE FROM ORDINARY OPERATIONS	85.757.000	81.600.000	81.648.860
Ancillary revenues			206.000
Ancillary costs		517.000	636.000
Result from non-core activities		-517.000	-430.000
Non-recurring income			
Non-recurring costs	7.372.000	9.562.000	190.000
Result from non-recurring items	7.372.000	-9.562.000	-190.000
GLOBAL GROSS ADDED VALUE	78.385.000	71.521.000	81.028.860
Depreciation and Amortisation	14.983.000	13.775.000	12.764.000
NET GLOBAL ADDED VALUE	63.402.000	57.746.000	68.264.860

* Reclassification of data from previous years based on new financial statement regulations

Even in 2018 the % of Added Value on consolidated Turnover has increased compared to the Consolidated Financial Statement 2017 without ERMO. In fact, 2017 turnover and the Consolidated Net Total Global Added Value were both influenced by the dismissal of our factory "ERMO SAS" in France. Despite this, the company was able to increase the turnover on the Hot Runner Systems market.

ADDED VALUE CREATED AS % OF REVENUE



2.2 / Distribution of Added Value

The Added Value is then analysed from the point of view of how it is distributed between the resources that have contributed to create it, in particular:

- *Personnel, through the remuneration of employees;*
- *Public Administration (PA), through taxes paid to the State;*
- *Lenders, with the payment of interest for loans, mortgages, leasing, etc.*
- *Community, through donations and sponsorships in support of social, cultural and sporting activities*

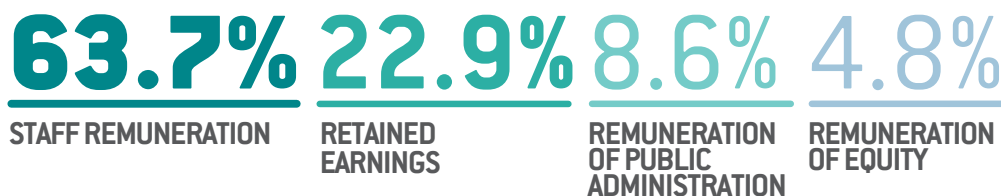
Finally, the operating result (profit, if any) may remunerate:

- Members/Shareholders with the distribution of dividends;
- and/or the Company itself, when profit is kept in the company for future investments and on-going company growth.

In the last financial year, the consolidated Value Added % allocated to employee remuneration was about 64% of the total VA. The remuneration of Public Administration through taxes paid to the State is stable at 8.6%. Remuneration of Credit Capital [funders] is stable at 4.8%. A big part, amounting to nearly 23% of added value was allocated to reserves in the company in order to continue to support growth and future investments.

BREAKDOWN OF ADDED VALUE	CONSOLIDATED 2017	CONSOLIDATED 2017 (no ERMO)	CONSOLIDATED 2018
External staff:	1.532.000	1.532.000	1.673.800
Employees	50.883.000	44.016.000	41.824.000
> Direct Remuneration	42.796.000	37.820.000	36.155.000
> Indirect Remuneration	8.087.000	6.196.000	5.669.000
STAFF REMUNERATION	52.415.000	45.548.000	43.497.860
Direct taxes	5.506.000	6.378.000	4.566.000
Indirect taxes		426.000	1.281.000
REMUNERATION OF PUBLIC ADMINISTRATION	5.506.000	6.804.000	5.847.000
Charges for short-term capital	2.215.000	2.128.000	2.450.000
Charges for long-term capital	1.417.000	1.417.000	843.000
REMUNERATION OF DEBT	3.632.000	3.545.000	3.293.000
Share of net income distributed to members/shareholders			
REMUNERATION OF EQUITY			
Share of profit allocated to reserves	1.849.000		
REMUNERATION OF THE COMPANY	1.849.000	1.849.000	15.627.000
NET GLOBAL ADDED VALUE	63.402.000	57.746.000	68.264.860

BREAKDOWN OF CONSOLIDATED ADDED VALUE 2017



2.3 / Investments

Over the course of 2018, INglass has achieved 10 million euro in investments, equal to 6.7% of the consolidated turnover.

This figure demonstrates how, in 2018, INglass continued to invest significantly in improving its own production structure mainly in Italy and China. Investments in material assets amount to approximately 4.9 million euro (49% of the total) and principally refers to plant and machinery (2.4 million), equipment (0.7 million), electronic office machines (0.7 million) and building decoration (0.6 million).

5.1 million euro (51% of the total) were allocated to the

purchase of non-material goods, the main expenses refer to research & development projects (2.4 million) and licence agreements for software (1.8 million).

INVESTMENTS	CONSOLIDATED 2016	CONSOLIDATED 2017	CONSOLIDATED 2018
INVESTMENTS IN MATERIAL ASSETS	6.956.000	9.909.000	4.869.000
INVESTMENTS IN NON-MATERIAL ASSETS	7.731.000	5.412.000	5.150.000
TOTAL	14.687.000	15.321.000	10.019.000

INVESTMENTS TYPE



2.4 / Auditing company

INglass Group has collaborated with auditing company RECONTA ERNST & YOUNG for years, for the certification of INGLASS SPA's annual financial statement as well as the Group's consolidated financial statement. The collaboration with Ernst & Young has gradually grown over the years with the Group's expansion, to also include certification of the statements of the foreign subsidiaries of major economic and strategic importance. As far as the INGLASS USA INC.

company is concerned, the audit task was assigned to the auditing company FUNARO & CO., P.C. located in New York. The company's growth, also in relation to the quality of the presented numbers, therefore, extends beyond the national borders, beginning a global certification process, which includes an increasing number of companies pertaining to the Group, year after year.

2.5 / Banks and Lending institutions

The relationship with Banks and various lending Institutions continue to play a key role in supporting the company and its investment and continuous improvement plans. Over the years our structure has continued to expand its international territorial extension and our preferences go to the Institutions that already have experience and international structures. Thanks to the contribution of Simest SPA, it was possible to complete the development project in North America, in the state of Michigan, where a new production plant started up with the opening of a new company, INGLASS USA INC. In 2016, the debenture loan initially amounting to 8,000,000 euros was early discharged and at the same time a new bank loan was taken, which was characterised by better economic conditions with less

operating and managerial constraints.

With reference to total outstanding loans, at the consolidated level, we have organised ourselves to sustain medium term investments with medium term financial instruments, substantially rebalancing the weight between short and medium/long term debt.

2.6 / Insurance companies

Insurance policies are independently managed by individual countries. In 2015, audits have been carried out at our foreign branches through the Willis international insurance network. We have also turned to the international network of Willis, which our Italian brokers also belong to, to further develop coverage on the new plant in Michigan (USA). In the Italian, Chinese and French manufacturing plants, contracts and areas of protection are very wide, whereas they are slenderer in the branches. Contracts provide for coverage required by law, as well as additional coverage to further protect people and the company's assets. Product

liability, leasing, employee transfers and life insurance policies are among the risks for which additional coverage exists. An additional policy is active in China and the United States compared to the regulatory requirements for medical coverage and employee accidents.

2.7 / Suppliers

From December 2017, the management of our suppliers has been divided by product category, based on an approach consolidated over the years by most medium-sized multinational companies

Consequently, the Purchasing team has been organized into the following categories:

- components made to customer specification
- raw materials/semi-finished products and treatments
- components from catalogs
- electrical and electronic material
- services and indirect materials
- finished molds

The Purchasing department's main objective is to maximize the value of the product/service in order to generate a competitive advantage for INglass

The measures to achieve this objective consist in improving performance (flexibility, punctuality, response times, innovation) and/or reducing total costs (purchase price, costs associated with low-quality, costs related to inefficiency, stock), while mitigating supply risk for the most critical/strategic categories.

Suppliers that are able to excel passing on value to INglass are rewarded with consolidated relationships by becoming partners.

Supplier performance is measured and assessed according to key performance indicators (KPI) which reflect critical factors for the success of the Company.

The supply strategy is defined for each product category by choosing the most appropriate purchasing policy and a targeted action plan.

The evaluation of potential suppliers is conducted by the Purchasing, R&D and Quality Departments for Direct Materials (components in BOM) and by Purchasing and Internal Customers for Services and Indirect Materials.

One of the most important medium-term objectives is to increase purchasing synergies, especially with China, which represents the market with the greatest growth prospects. Part of the expenditure related to the supply of mechanical components made to customer specification has been reduced by utilizing our own internal production departments, optimizing costs and reducing lead times for the assembly

In 2018, there were approximately 370 suppliers of direct materials who collaborated with INglass group, supplying the production plants in Italy, China and the United States, while the global number of service suppliers is much higher.

	CONSOLIDATED 2018
Services and Indirect materials	25%
Components made to customer specification	23%
Electrical and electronic materials	16%
Commercial components	14%
Raw materials	12%
Finished molds	5%
Third party	5%

SOCIAL SUSTAINABILITY

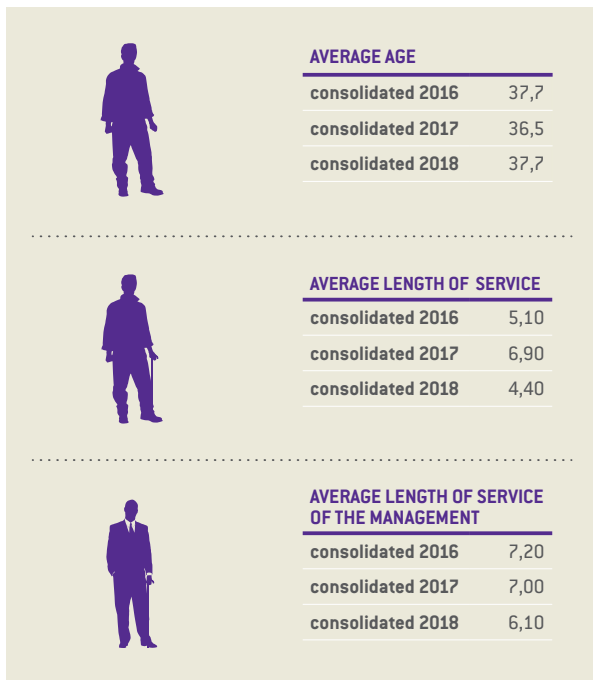


3.1 / Human resources

People at INglass have always represented one of the most important resources in the pursuit of the company mission. Top-notch skills and industry know-how, the ability to continuously innovate processes and strong attention to product, love for challenge and improvement, and last but not least, strong interpersonal skills and shared values: these are some of the unique and irreplaceable elements that differentiate us in the marketplace and impart added value to our work.

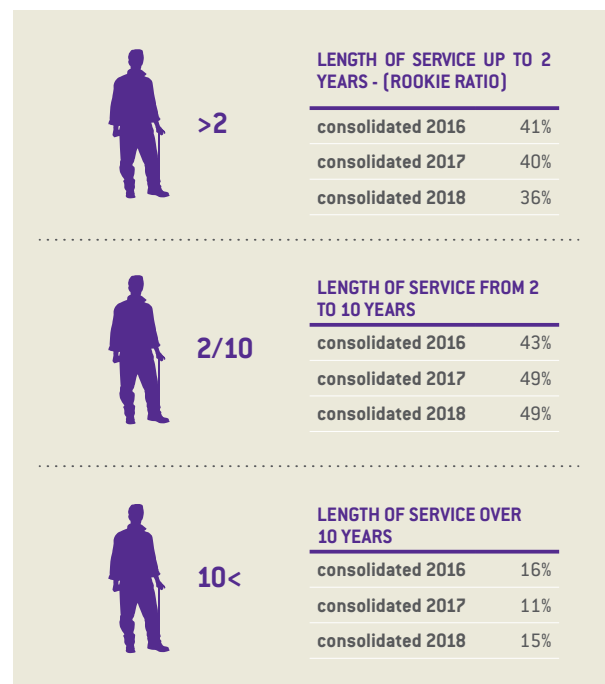
3.1.1/STAFF BREAKDOWN

As of 12/31/2018, the INglass Group employs 1094 people worldwide, of which 912 are men and 181 are women. The number has increased about 6% compared to the total of 1031 in 2017. The average worldwide age of staff is higher than in 2017, reaching 37.7 years, while for management it has instead decreased 5 points amounting to 40 years.

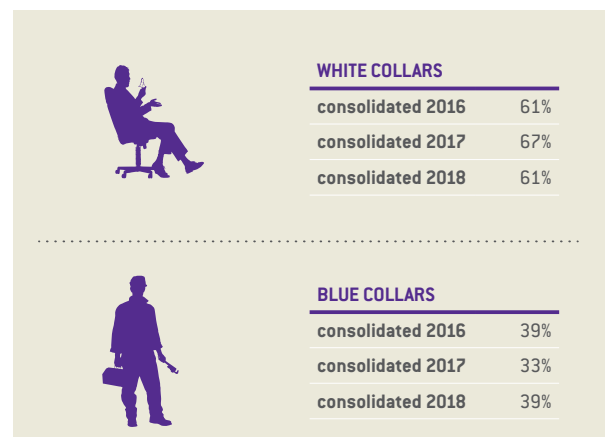


The average length of service has decreased 2.5 points worldwide (from to 6.9 to 4.4 years) and less than 1 year for the management team. The percentage of employees with over 10 years seniority has increased to almost 15%, while seniority between 2 and 10 years is stable (around half of

people of the team belong to this group) and those with less than 2 years service has decreased to 36%.



Indirect (not directly engaged in production activities and therefore whose working hours are not attributable to any specific production order) and direct personnel are more or less the same amount (48.5% versus 51%). The % of blue collar reached 39%, compared to 61% of white collars. The percentage of University graduates to total employees has increased by about 9 points and equals 38.5% of the worldwide total.





GRADUATES

consolidated 2016	23%
consolidated 2017	29%
consolidated 2018	38%

3.1.2/TURNOVER

The total staff turnover (sum of recruits and dismissed, divided by average number of employees) is a figure that presents very different values in the various countries. Therefore, starting with the 2014 consolidation, it was decided to indicate only the absolute value of hirings and resignations, given that the turnover calculation (for which there are likewise various methods of calculation) is misleading in our view. In 2018 the total is stable and global recruitments versus resignations represents more or less the same number.



TOTAL NEW HIRES

consolidated 2016	257
consolidated 2017	232
consolidated 2018	196



TOTAL TERMINATIONS

consolidated 2016	177
consolidated 2017	168
consolidated 2018	214

3.1.3/ORGANIZATION AND GROUP STRUCTURE

The organization of work is very similar at the three production plants in Italy, China and USA, with one CEO that all three plants report to including both their Sales and Operations functions and their Staff activities. The branches do not include a production area and their teams consist of a Branch General Manager, designers, sales representatives, technical service engineers and technical-commercial specialists supporting the sales force (SSE), Sales Assistants (internal commercial support for sales representatives) and the recently introduced KAMs (Key Account Managers). The KAM is a figure that was introduced

into the company in 2012, whose role consists in servicing a few key, global customers in a highly focused way. They manage the relationship with their own HQ, as well as with branches and establishments worldwide, in order to always have a complete and updated view of new projects and opportunities. It is a transversal figure, linked to HQ from a strategic point of view and to the various branches from an operational point of view. The branches and foreign plants, although autonomous in their operational management, report to Italian HQ for strategic planning and the monitoring of results. The Global Sales Meeting, a meeting held twice a year, in rotation at one of the group's world branches, continues to represent an important moment in terms of discussing objectives, strategies, results, prioritization and analyses of any unresolved problems. Since 2013, the same procedure for review and updating has been applied to the Service structure as well, with the organization of a Global Service Meeting at Italian Headquarters for the whole service team. Beginning in 2014, the Global Innovation Meeting was also added with the goal of creating an opportunity to share technology and product innovations. It has been extremely important in aligning the various branches and giving rise to new opportunities for implementation which are shared and evaluated together.

3.1.4/SELECTION AND RECRUITMENT

The search and selection of personnel is carried out by the human resources department within the Italian HQ. Given the complexity and quantity of activities carried out at the Chinese and USA plants, their management of human resources is independent, except for managerial positions. The branches instead, which do not all have a dedicated HR function, are provided with assistance and supported in their decision making by the Italian HR management, mainly about the more experienced job profiles. For each new position to be filled, we define the job description and profile, in addition to detailing the technical and transversal skills that the profile should include. This allows us to have an always updated job description manual, with activities and duties details of all the positions within the company. Once the profile has been defined, the selection process is structured through individual selection interviews and the use of psychometric tests and individual assessments.

For the technical area, R&D, service and area operation, we provide prospective candidates with technical tests prepared internally. Once again in 2018, the applications submitted through our website were numerous, almost 500 online, in addition to another 200 applications in traditional paper format. In fact on the company's website it is possible to monitor the open positions both at Italian and foreign offices and to submit an application. This tool was introduced in 2012 and has proven to be extremely effective.

While we try to adopt a uniform occupational policy for all employees in Italy and abroad, we also recognize the specificities of varying situations. Recruitment of high school and university graduates, regardless of the position they will fill, is carried out with fixed-term contracts of up to maximum 18 months, with the prospect of changing the contract into a permanent one at the end of the temporary employment if mutual expectations are met. Instead, for positions requiring experienced profiles, the type of contract is evaluated on a case to case basis and is nonetheless always subject to a trial period. In 2018, the percentage of permanent employment contracts compared to fixed-term contracts has slightly increased amounting to more than 92% globally. The Chinese labour market deserves separate consideration, since by law all work contracts of less than a 10-year duration are regarded as fixed-term. For the purposes of our group calculations however, these contracts have been assimilated with the Italian permanent work contracts, given that they are substantively treated in the same way.

All employment contracts adhere to regulations stipulated by the individual countries in which the company operates and where personnel are employed.



The collaboration between the school and work environments remains very useful as it offers the opportunity to identify potential new employees. The presence of interns, trainees and undergraduates within the workforce is quite prevalent in Italy, especially for structural and logistical reasons, but in 2018 training students were also hosted in China and Brazil, for a total of 27 such workers worldwide.

3.1.5/EMPLOYMENT AND REMUNERATION POLICY

Over the past few years, the group's remuneration policy has included a variable portion of remuneration tied to the achievement of both individual and team goals. In fact, we believe that an ever-increasing participation in the determination and pursuit of company objectives is fundamental. And variable remuneration underlines this aspect. Each year, Management identifies the individuals that are most extensively and directly involved in the achievement of important business objectives and together they agree upon criteria for the granting of annual economic bonuses (Mbo - Management by Objective) in proportion to the achievement of these pre-established results. As of 12/31/2018, 897 individuals worldwide have participated in this process of shared earnings.

Salary increases are instead recognized in case of consolidated professional growth and the acquisition of specific skills within the assigned company position. One-off bonuses are paid to personnel whose contributions or results significantly exceed expected company objectives. Length of service or age has no prevalence whatsoever in determining career advancement or internal career development paths. For the three-year period 2017-2019, the II-level Union Agreement in Italy was renewed once again, an agreement aimed at rewarding workers with a

performance bonus calculated according to the company's productivity and profitability indicators. In addition, in Italy we also use tools for mapping skills and assessing potential, which allows for the annual monitoring of an individual's professional evolution and development. The comparison between expected and achieved results then becomes the grounds for one-off bonuses or the determination of corrective actions or additional training courses.

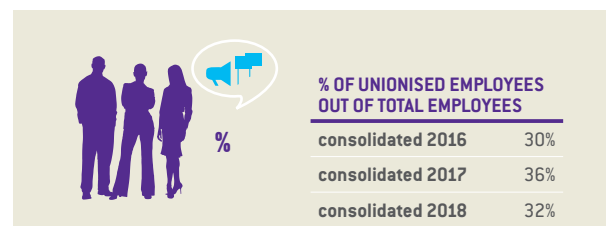


A tool of fundamental importance for the company is the process of job rotation. Personnel rotation allows employees to rapidly build-up experiences in various functions and sectors, perfecting skills and thereby increasing their career opportunities. In addition, it allows the company to further expand its flexibility, but even more, to preserve and retain in-house its fundamental and strategic capabilities.

Furthermore, we have launched an international mobility and exchange project for SSE designers and technicians aimed at better understanding local diversities in terms of requests coming from customers, activities management and work organization, as well as improving the communication and relationships between colleagues operating in different locations. It is a growth path for internal resources, which likewise fosters the creation of an inter-nationality climate. Thanks to this continuous exchange, difficulties and linguistic barriers, distances and incomprehension between branches and HQ have progressively diminished. The project entails a period abroad of approximately 6-12 continuous months, the most efficient duration in order to give real operational support to foreign colleagues and to really improve the local language.

3.1.6/INDUSTRIAL RELATIONS

We desire the relationship between the various parts of the company to be mutually beneficial and harmonious. We therefore encourage an open and honest exchange between employees and Management, in the interest of better directing the company's choices, whenever possible, while also satisfying the needs of the individual. The company has always periodically met with key Trade Union Representatives, to discuss and provide updates on the company's business performance. The year-end speech, in which the Chairman illustrates the achieved results, underlines new challenges, and shares future strategies, continues to be a participated and meaningful event.

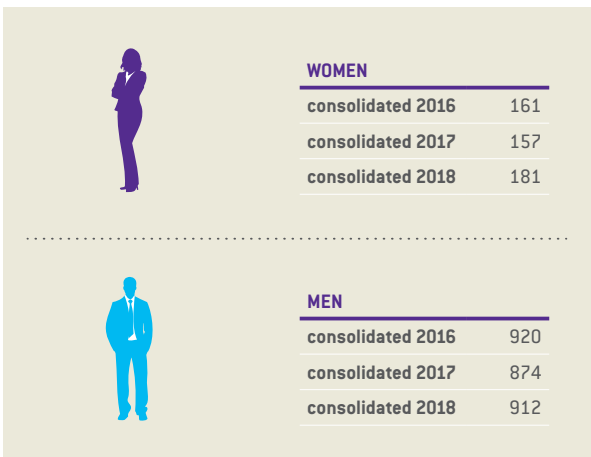


At INglass, union membership only applies to the three production plants.

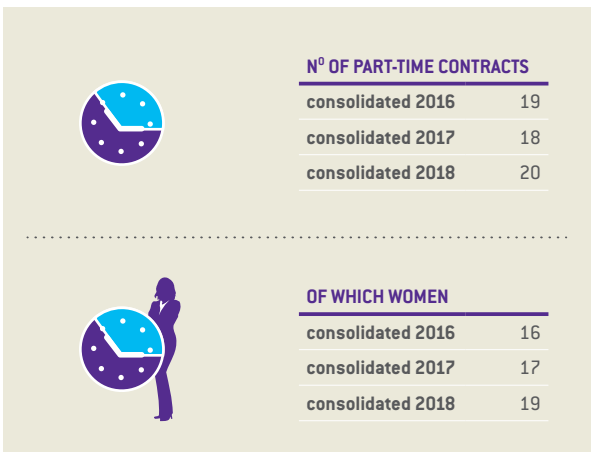
The data should be read for each single country, as there are local and cultural diversities which are reflected in very different numbers in the individual countries. In 2018 in both Italy and China, the number of members has decreased both in total number and in % of the total number of employees. As for China we should also consider the fact that becoming unionized is a widespread and consolidated practice for all workers who have passed the trial period. On an overall group level, the total number of union members worldwide has decreased of about 4 points and amounts to 31.7%.

3.1.7/PROTECTION OF EQUAL OPPORTUNITIES AND RESPECT FOR HUMAN RIGHTS

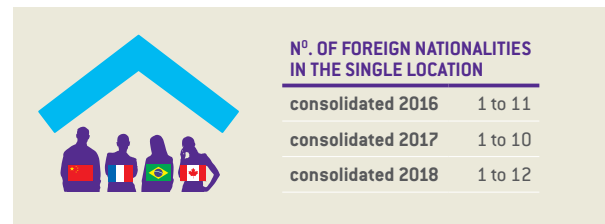
We are completely against any form of discrimination. We apply the same criteria in every country where we operate when striving to select the best employees, without any form of discrimination. Female presence on the global level has increased to 181 employees, equal to approximately 16.6% of the total workforce.



Respecting employees also entails trying to find a work-life balance that meets the needs of both parties, without compromising expected performance. Part-time employment is a work solution increasingly requested and therefore offered within INglass. At present it is especially sought after by women, due to the family need to care for young children. Other opportunities are the Home Office and the Smart Working, solutions we first started to use in a few departments in 2018.



In half of the company's locations worldwide, there are employees of foreign nationalities, with Canada having the highest number, namely 12.



We worldwide respect the existing national legislation concerning the promotion and employment of personnel belonging to legally protected categories since we strongly recognize its worth. Today, INglass employs a total of 9 people worldwide belonging to disadvantaged categories.



Youth employment in Italy is exclusively adopted during the summer months for students in their last years of high school. It refers to a strictly regulated work-study program and we scrupulously observe all existing regulations. In China and other branches, no personnel under the age of 18 years old is employed.

3.1.8/TRAINING

Training continues to play a very important role within the company. The collected figures, however, are incomplete since they do not consider mentoring for people changing roles within the company, or the numerous daily opportunities for cross-training between individual functions and offices. In 2018 more than 990 individuals worldwide were involved in at least one training program in the course of the year, accounting for more than 90% of the total workforce, with 11% increase from last year.



TRAINING COST

consolidated 2016	€ 230.000
consolidated 2017	€ 112.213
consolidated 2018	€ 196.365



PER-CAPITA COST

consolidated 2016	€213
consolidated 2017	€ 109
consolidated 2018	€ 180



TOTAL TRAINING HOURS

consolidated 2016	28.000
consolidated 2017	29.560
consolidated 2018	27.500



PEOPLE INVOLVED IN TRAINING

consolidated 2016	795
consolidated 2017	813
consolidated 2018	990

In 2018 the company has organized more than 27.500 hours of training worldwide, 37% of which was focused on training for apprentices and new employees. The chart shows that almost 12% of the hours were spent training on dedicated software, 11% on safety training and an additional 11% on product training. The 9% of the hours were spent on training for the production areas while 8% on language trainings. A percentage just below 6% refers to Administration and Finance area, Quality training, Human Resources, Information Technologies and Management training.

TOTAL HOURS OF TRAINING CONSOLIDATED 2018

- % hours of apprentices' and new employees' training	37%
- % hours of training hours on dedicated software	12%
- % hours of technical product training	11%
- % hours of training on safety	10%
- % hours of training in the production area	9%
- % hours of language training	8%
- % hours of management development training	5%
- % hours of training in the ICT area	2%
- % hours of training in the administration and finance area	2%
- % hours of training in the quality area	1%
- % hours of training in HR	1%

LEARNINGCLASS – THE ACADEMY

Starting in 2018, INglass decided to devote even more time to training, trying to develop more structured internal courses on specific topics related to products or processes. The trainings have been held by senior figures of the company, with proven experience and specific knowledge. We consider this a way to value the people who have been working in the company for many years and who can, in certain instances and on specific topics, train younger and less experienced colleagues better than external consultants. It's also a very useful way to share company know-how in a more direct and efficient manner. In 2018 the first courses involved technical departments in mould and hot runner design both inside the company and at partners' sites. The trainings will continue in 2019 with managerial and soft competencies courses and other technical modules.



3.1.9/SAFETY

The safeguarding of a healthy work environment and the safety and health of its workers are at the top of INglass's priorities.

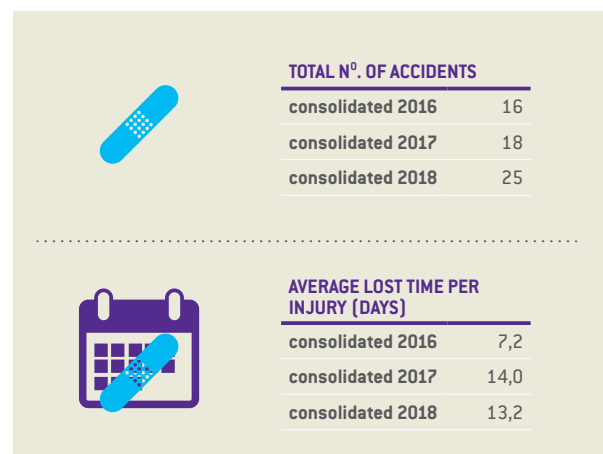
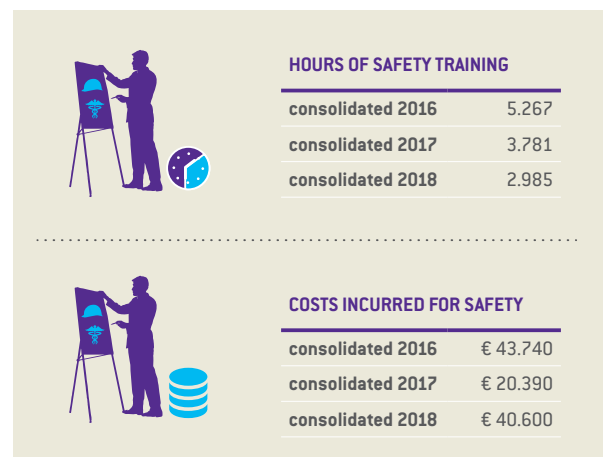
In compliance with the provisions of existing legislation on the matter, we are committed to maintaining a safe working environment and providing employees, pursuant to their specific activity, with all the appropriate and necessary equipment to protect them from any risk or danger to their physical well-being. We inform employees of the conditions, practices and procedures imposed by law regarding health and safety in the workplace. We maintain our production plants, offices and operating systems in compliance with all health and safety standards.

The means used to provide safety in the workplace are many: application of all possible precautions in the layout and tooling of machinery, timely compliance to regulatory updates for increased safety, specialized training, allocation of safety devices to all individuals that require them and the utmost severity against anyone who does not comply, continuous awareness of both internal personnel and external visitors.

Employees and collaborators must in turn abide by the conditions imposed by law, as well as follow all practices and procedures adopted by INglass, ensuring that their actions do not put themselves or others at risk. In addition, they must inform their superiors of any behaviour or risk potentials that could compromise the safety of their work environment.

Although continuing rigorously to pursue these objectives, over the course of 2018 a total of 25 injuries took place, 15 of which in Italy, 6 in the USA and 3 in China. In particular, the increased "average duration of injury" data has been largely impacted by one blunt force trauma incident caused by operator distraction, that required a long period of leave from work.

The company's effort and commitment to ongoing safety training, specific risk analysis, the search for continuous improvement of working conditions, and making sure each company department is aware of all these issues, remain constant and continuous priorities.



3.1.10/INTERNAL COMMUNICATIONS

Internal communication is carried out using traditional tools, mainly electronic mail. Each employee, both in Italy and abroad, has a company email address and access to the company intranet connection where work documents are shared. Each location also has a video conferencing system available, which is used daily in branch meetings. For telephone calls Skype is used whenever possible, while in each individual location the prevailing mode of communication is the staff meeting, together with email. Organizational communications are posted on the bulletin board and, if appropriate, also displayed on related signs which are periodically updated. A monthly meeting is held between the Top Management and Management for aligning strategy, sharing projects and addressing problem issues. This meeting is also extended to foreign Branch Managers twice a year. Lastly, once a year, the Chairman shares results and planning for the following year with all Italian employees and a rotating representation from the foreign

staff, as well as with union representatives who wish to attend the meeting.

3.1.11/ORGANIZATIONAL CLIMATE AND MOTIVATION

We believe people's motivation in carrying out their various activities is a key element for ensuring the highest quality standards, both in terms of the services/products provided to the customer, as well as in the quality of life of our employees.

The organizational climate within the company has been frequently analysed in the past, in a structured way by external professionals. In addition, individual interviews continued to be held with most employees throughout 2018, to better understand the degree of worker satisfaction both in terms of duties and the overall organizational climate.

We do believe, however, that motivation and any eventual problems that can arise inside the company can be better grasped and addressed only through proper interpersonal relationships between employees and management, an approach that we promote and monitor daily.

We are also convinced that people's motivation is not exclusively linked to economic incentives (see occupational Policy section) but rather on numerous aspects of the company-employee relationship. Though not directly corresponding to economic remuneration, these aspects play an important role for many in making INglass a preferable place of employment. Consider, for example, the flexibility acknowledged in the organization of one's own work, the promotion of important internal paths for professional development (so much so, that a majority of managers come from career paths within the company), the continual training offered, the international nature of the company with the possibility to undertake professional experiences at one of the group's foreign branches. All these are aspects that have characterized the company for many years.

In order to gather feedback from so many employees regarding personal and family issues, the most streamlined and effective tool we have identified is the online questionnaire. Thanks to this tool, general information can be quickly collected in order to guide feasibility studies and any subsequent implementations.

Agreements regarding reduced rates for employees were also renewed and extended for the following entities: three Medical Clinics, a local Travel Agency, an Insurance Agency, three banks, one music school and an English school. We added also a Nursery school and a host of other providers of goods and services of mutual interest (tire shop, mechanic, optician, hairdresser). Finally, an in-house cafeteria service with reduced prices continues to be available to employees,

as well as favourable terms with regard to compensation for travel expenses and travel time, when comparing to the National Collective Bargaining Agreement.

3.2 / Customers





3.2.1/CUSTOMER ANALYSIS AND CHARACTERISTICS

	TURNOVER	
	consolidated 2016	€ 140.122.000
	consolidated 2017*	€ 150.729.000
	consolidated 2018	€ 150.244.000

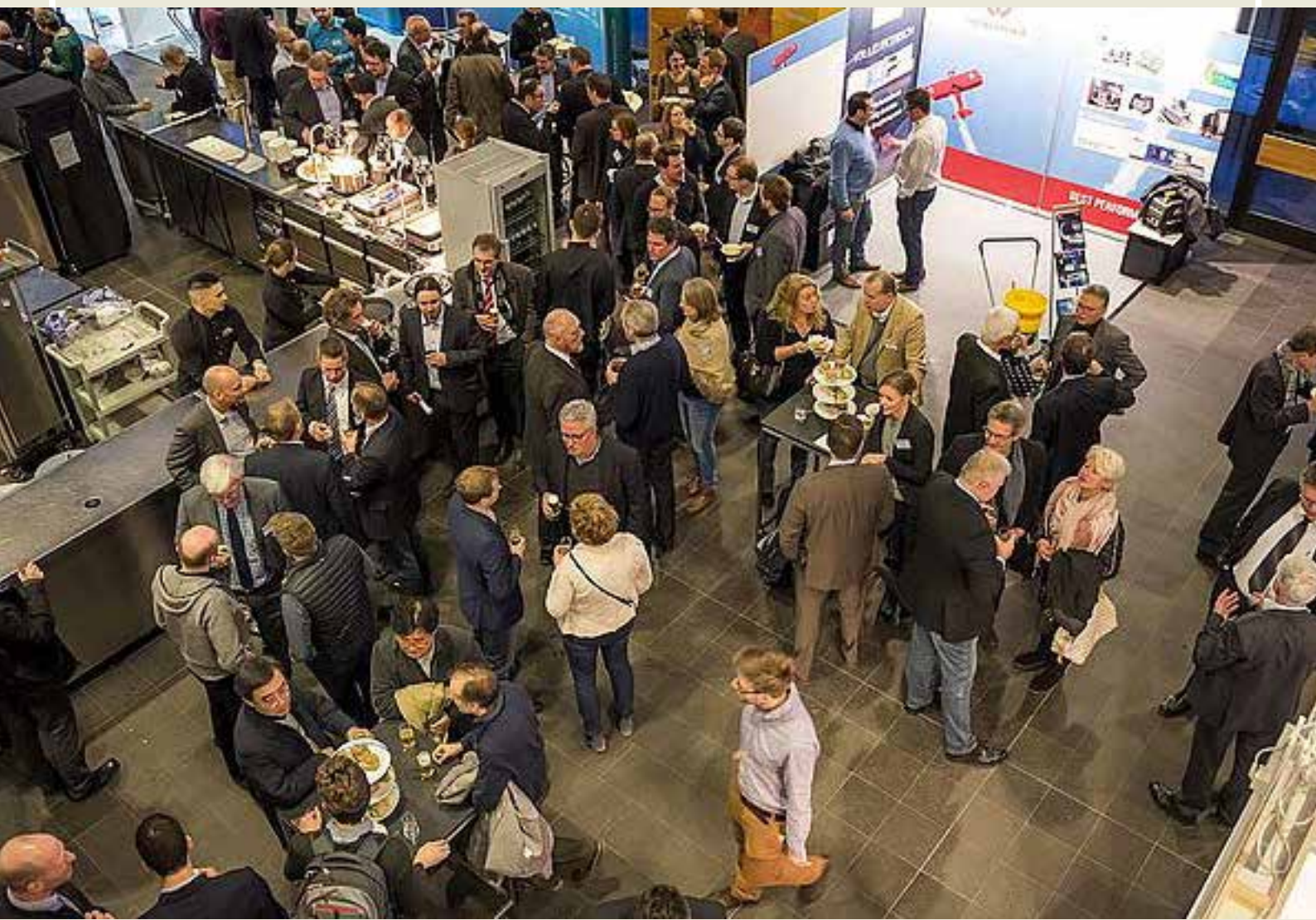
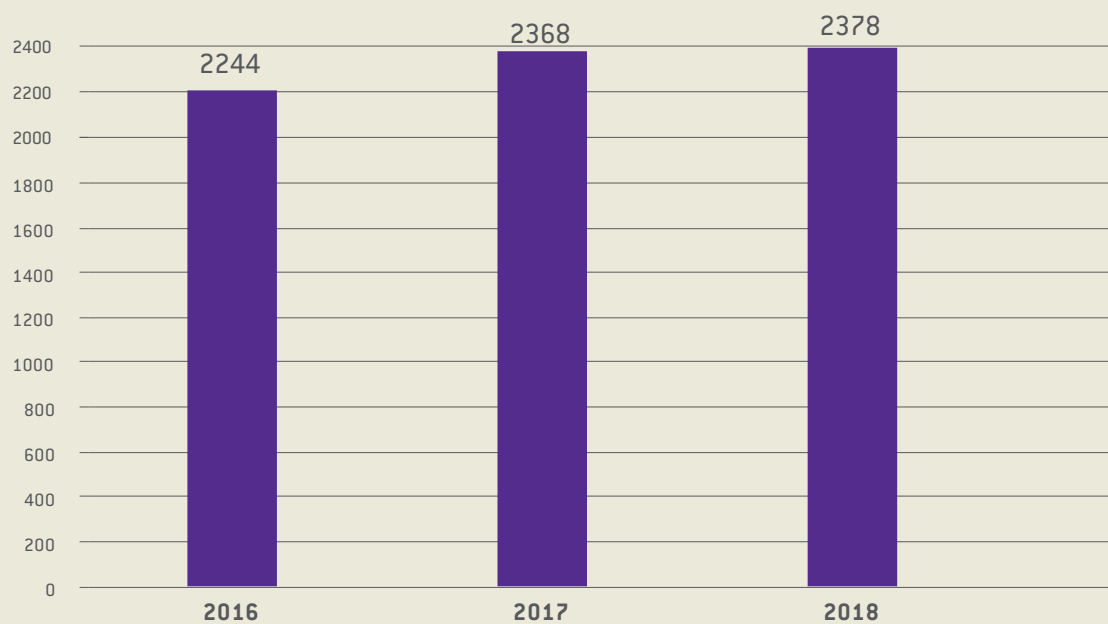
* Revised due to Ermo division dismissal. For further details see Chapter 2.

In 2018 the turnover remained stable in comparison to the Consolidated Financial Statement of 2017.

The division of the turnover between the 4 geographic market areas remains basically unchanged, with Asia and Australia reaching almost 31%, Europe and Africa at 31.2%, Americas 19.5% and Italy 18.6%.

	EUROPE / AFRICA
	consolidated 2016 37.0%
	consolidated 2017 33.0%
	consolidated 2018 31.2%
	ITALY
	consolidated 2016 18.0%
	consolidated 2017 16.0%
	consolidated 2018 18.6%
	AMERICAS
	consolidated 2016 19.0%
	consolidated 2017 22.0%
	consolidated 2018 19.5%
	ASIA / AUSTRALIA
	consolidated 2016 27.0%
	consolidated 2017 28.0%
	consolidated 2018 30.7%

WORLDWIDE CUSTOMERS INglass GROUP



3.2.2/RESEARCH AND DEVELOPMENT

Research, Development and Product Engineering have always been central to INglass and have allowed us to become one of the market leaders. Every single product is the result of in-depth analysis and repeated moulding trials. We are certain that only by anticipating market needs and trying to constantly stay in tune to the customer's requests, can a company achieve high results and continue to grow. Our commitment on this front is absolutely shared and spread transversely across the company. Today, the INglass Group employs approximately 270 people dedicated to R&D, Product engineering and improvement activities. The technicians perform analyses and tests, develop and design new products, improve existing ones, and conduct fluid dynamic, thermal and structural analyses.

In addition, great importance is given to experimental tests, which are managed in an area dedicated to R&D. This area has been equipped with new LAB tools, as a new IM machine in addition to the previous ones. Another important aspect is also the held expertise that R&D has acquired over the years, which allows it to be a valid technical support to our sales and service personnel worldwide.

The heart of the company's Research and Development is located at the HQ in Italy, while smaller R&D groups operate in the Chinese plant. The R&D team includes highly skilled engineers and technicians, skilled injection press operators, assembly and process professionals, who guarantee that every product is fully approved before being brought to the market. Research activities are aimed at a detailed analysis of the new component to be developed, cross-referencing it then with the experimental data obtained during laboratory tests. In this way, the mathematical models can be calibrated according to the real boundary conditions used. In many cases we offer ourselves to the end customer as a developmental partner, allowing us a 360° view of the product.

Thanks to the new standardization process, product release times have been reduced. Everything follows well defined processes, governed by following the concept of lean process. The testing area has been revised and enhanced for this purpose.

New production processes and methodologies have been addressed and implemented, aimed at making the product even more efficient and appealing. This has allowed the group to consolidate its global position in terms of High Tech & Quality products.

Investments in R&D remain stable in terms of impact on the turnover compared to last year. In fact, in 2018, more than

2.8 million euro were invested in R&D, representing 1.9 % of the consolidated turnover.

To protect the results of substantial investments made over the years, 157 patent applications have been filed up to date for R&D activities.



FILED PATENTS FOR APPLICATION AREA

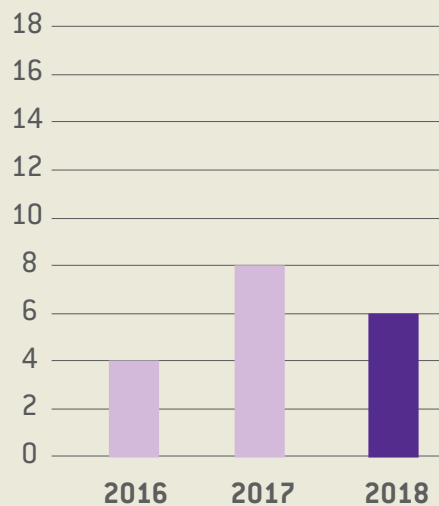
89%

Hot Runner Systems Division

11%

Moulds Division

FILED PATENT APPLICATIONS PER YEAR



PATENTS AWARDED AND VALID IN AT LEAST ONE COUNTRY AT 31.12.2017

Date of filing	Priority number of patent application	Title	Group product
27/04/2001	T02001A000399	Nozzle for injection moulding of plastic materials.	HRSflow
11/10/2004	T02004A000700	Process for the production of plates made of transparent plastic material with non-transparent areas.	INGlass
11/10/2004	T02004A000701	Process for the production of plates made of plastic material with parts over-moulded by injection-compression.	INGlass
11/10/2004	T02004A000702	Process for the production of plates made of transparent plastic material with non-transparent over-injected parts.	INGlass
11/10/2004	T02004A000703	Process for the production of plates made of plastic material with parts over-moulded by injection-compression.	INGlass
22/07/2005	T02005A000505	Process and apparatus for the production of articles made of plastic material with at least one over-moulded component.	INGlass
22/07/2005	T02005A000506	Process and apparatus for the production of articles made of plastic material with at least one over-moulded component.	INGlass
22/07/2005	T02005A000507	Process and apparatus for the production of articles made of plastic material with at least one over-moulded component.	INGlass
27/01/2006	T02006A000057	Injector for injection moulding equipment of plastic materials.	HRSflow
28/12/2006	TV2006A000237	Method for detecting abnormal operation in a plastic injection moulding equipment.	HRSflow
01/03/2011	T02011A000178	Injector for injection moulding equipment of plastic materials.	HRSflow
01/03/2011	T02011A000179	Injector for injection moulding equipment of plastic materials.	HRSflow
28/06/2012	T02012A000578	Apparatus for injection-moulding of plastic materials.	HRSflow
09/10/2012	CN201220520236.4	Hot runner jet nozzle and special sleeve spanner.	HRSflow
09/10/2012	CN201220520246.8	Heater strip bending tool.	HRSflow
09/10/2012	CN201220520251.9	Protective casing of hot runner nozzle.	HRSflow
09/10/2012	CN201220520253.8	Temperature controlled nozzle.	HRSflow
16/10/2012	TV2012A000198	Valve pin bushing for the hot runner of an injection mould.	HRSflow
30/10/2012	CN201220574000.9	Nozzle with material isolation cap.	HRSflow
30/10/2012	CN201220573973.0	Valve needle drive device with heat radiating function.	HRSflow
30/10/2012	CN201220573975.X	Nozzle with multi-element core.	HRSflow
30/10/2012	CN201220573997.6	Sprue bushing component on nozzle.	HRSflow
24/12/2013	T02013A001071	Apparatus for injection-moulding of plastic materials.	HRSflow
24/12/2013	T02013A001073	Apparatus for injection-moulding of plastic materials.	HRSflow
03/03/2014	T02014A000170	Nozzle terminal for injectors of plastic material injection molding apparatus.	HRSflow

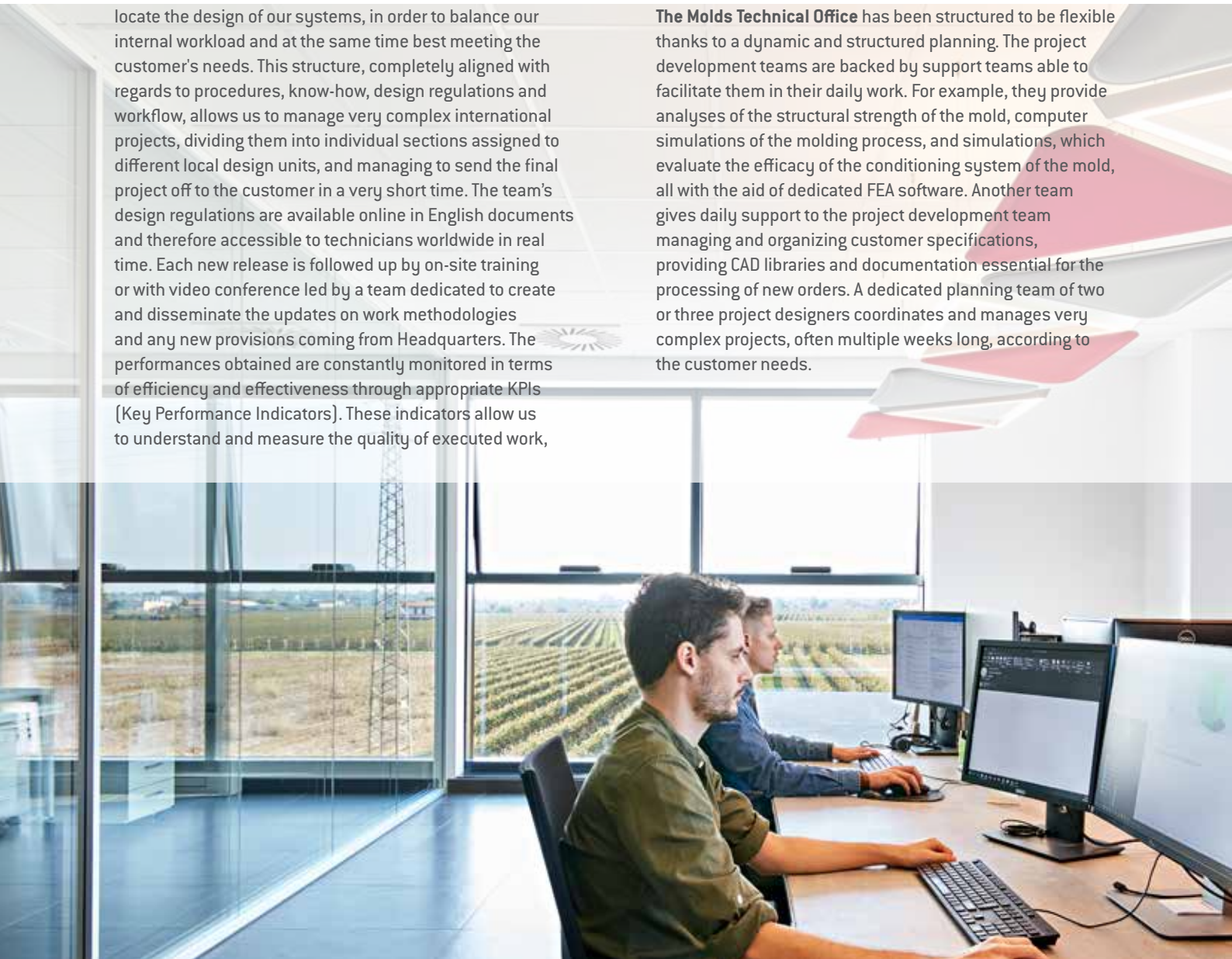
Date of filing	Priority number of patent application	Title	Group product
10/03/2014	T02014A000188	Apparatus for injection-moulding of plastic materials.	HRSflow
18/03/2014	T02014A000216	Method of injection moulding of plastic materials.	HRSflow
09/05/2014	TV2014A000069	Management system for injection press molding problems.	HRSflow
18/06/2014	CN201420333163.7	Thermoelectric couple device of flow splitting plate.	HRSflow
08/09/2014	T02014A000701	Method and apparatus for the injection moulding of plastic materials.	HRSflow
15/10/2014	T02014A000838	Apparatus for injection-moulding of plastic materials.	HRSflow
14/11/2014	CN201420683570.0	Cooling water insert.	HRSflow
10/12/2014	T02014A001021	Molding apparatus and method for producing articles molded through sequential injection.	HRSflow
10/12/2014	T02014A001022	Injector for injection moulding equipment of plastic materials.	HRSflow
11/12/2014	T02014A001030	Method and apparatus for the injection moulding of plastic materials.	HRSflow
28/01/2015	T02015A000059	System and method for injection molding of plastic materials.	HRSflow
03/03/2015	TV2015A000040	Method for producing transparent or semi-transparent components.	HRSflow
12/03/2015	IT102015000008368	Method and apparatus for the injection moulding of plastic materials.	HRSflow
07/04/2015	CN201520205073.4	Two-piece spacer.	HRSflow
07/04/2015	CN201520205114.X	Anti-seize bushing.	HRSflow
11/05/2015	IT102015000014572	Method for managing an apparatus for the injection molding of plastic materials.	HRSflow
17/07/2015	IT102015000035401	Nozzle terminal for injectors of plastic material injection molding apparatus.	HRSflow
14/08/2015	IT102015000044745	Nozzle terminal for injectors of plastic material injection molding apparatus.	HRSflow
12/10/2015	IT102015000060495	Spray nozzle for plastic injection moulding devices for the production of transparent or semi-transparent aesthetic vehicle components, such as lenses for lighting and injection moulding.	HRSflow
12/10/2015	IT102015000060311	Device for injection molding of plastic materials.	HRSflow
10/12/2015	IT102015000081904	Apparatus for injection-moulding of plastic materials.	HRSflow
17/03/2016	CN201620207028.7	Needle valve type hot runner system.	HRSflow
30/05/2016	IT102016000055364	Apparatus and method for the injection moulding of plastic parts of a same family in the same mould.	HRSflow
02/05/2016	IT102016000044688	Method and apparatus for injection moulding of plastic material.	HRSflow

THE TECHNICAL DEPARTMENT constitutes a worldwide network divided into two product areas: molds and hot runner systems.

The Hot Runner Systems Technicians work in all production plants and in each branch. They design the product, prepare the Cam paths and provide support to the sales force. Furthermore, each local team designs and provides technical assistance to customers on-site and supports other branches as needed. Thanks indeed to an advanced and integrated Planning and Design system, it is possible to simulate different scenarios and understand where to locate the design of our systems, in order to balance our internal workload and at the same time best meeting the customer's needs. This structure, completely aligned with regards to procedures, know-how, design regulations and workflow, allows us to manage very complex international projects, dividing them into individual sections assigned to different local design units, and managing to send the final project off to the customer in a very short time. The team's design regulations are available online in English documents and therefore accessible to technicians worldwide in real time. Each new release is followed up by on-site training or with video conference led by a team dedicated to create and disseminate the updates on work methodologies and any new provisions coming from Headquarters. The performances obtained are constantly monitored in terms of efficiency and effectiveness through appropriate KPIs (Key Performance Indicators). These indicators allow us to understand and measure the quality of executed work,

pursuing the company's practice of focusing on constant improvement in our processes. R&D and Engineering technicians in Italy and abroad all use the same software. This ensures the exchange of information and activities between the various work teams is even quicker. Much room is given to computer simulation and virtual optimization of projects using FEA (Finite Element Analysis) techniques. These methodologies are widely used for design validation, allowing virtual performance investigation of our systems right from the design phase, evaluating different technical solutions and improving their reliability and effectiveness.

The Molds Technical Office has been structured to be flexible thanks to a dynamic and structured planning. The project development teams are backed by support teams able to facilitate them in their daily work. For example, they provide analyses of the structural strength of the mold, computer simulations of the molding process, and simulations, which evaluate the efficacy of the conditioning system of the mold, all with the aid of dedicated FEA software. Another team gives daily support to the project development team managing and organizing customer specifications, providing CAD libraries and documentation essential for the processing of new orders. A dedicated planning team of two or three project designers coordinates and manages very complex projects, often multiple weeks long, according to the customer needs.



3.2.3 DIGITAL TRANSFORMATION AND INFORMATION SYSTEMS: A STRATEGIC LEVERAGE FOR COMPANY GROWTH

Data driven decision making. Thanks to the advanced Business Analytics tools implemented by the INglass Group in 2018, data has become a true company asset, a precious resource for accelerating and focusing the decision-making processes. The ability to collect and translate data into information has allowed the company to open up new business models, identify new revenue opportunities, identify the latest market trends and improve customer experience, no longer thinking solely in terms of product, but also in response to customer needs.

In the era of Industry 4.0, Digital Transformation became pervasive and transversal at all levels of the company. Innovative platforms such as MES, CRM, PLM and ERP have revolutionized the way of communication within the company by enabling a "collaboration" that helps people more easily share the workflow and work in a synergistic way. Thanks to the application coverage guaranteed by information systems on all company processes, in 2018 it was possible to manage orders in an efficient and global manner based on capacity and level of saturation at the various production plants, thus increasing operational efficiency.

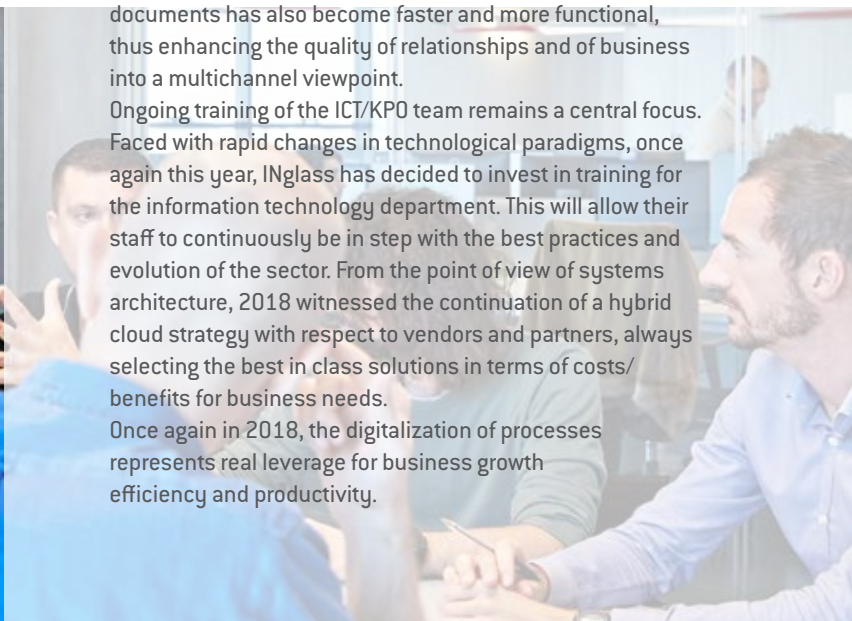
The average age of staff has been among the key factors accelerating the Digital Transformation process within the company. In fact, many employees can be defined as Digital Natives, or rather, belonging to that generation who

grew up surrounded by new technologies and for this very reason naturally master tools and methods with ease. With the advent of new digital expertise, a new culture and new skills have entered and become part of the Group, while at the same time also new threats. Hence the decision in 2018 to continue courses on computer security, in order to increase awareness in all employees of the great potential, but also countless risks, tied to the technology inherent in information systems.

In 2018, INglass also continued its course of Automation, which consists in utilizing mechanical, electronic and computer technologies to control industrial processes, whereby reducing (or eliminating) human intervention in the design and production of goods and services. This drive for continuous improvement has led to a redefinition of work positions, elevating people to perform more qualifying tasks and entrusting the most repetitive or merely operative jobs to machines or software. Among our future challenges, one major target is the Autonomous System: ambitious projects that are being defined by ones in which the machines will be able to autonomously make decisions, thanks to very particular, machine-learning algorithms.

2018 was also the year in which the Dematerialization process was further accelerated, which involves the substitution of paper documents with entirely digital documents. The diffusion of digital devices (smartphones, computers, tablets, etc.) on the one hand, and access to cloud enabling systems on the other, have led to considerable savings in paper and, consequently, a reduced impact on the environment. At the same time, access to documents has also become faster and more functional, thus enhancing the quality of relationships and of business into a multichannel viewpoint.

Ongoing training of the ICT/KPO team remains a central focus. Faced with rapid changes in technological paradigms, once again this year, INglass has decided to invest in training for the information technology department. This will allow their staff to continuously be in step with the best practices and evolution of the sector. From the point of view of systems architecture, 2018 witnessed the continuation of a hybrid cloud strategy with respect to vendors and partners, always selecting the best in class solutions in terms of costs/benefits for business needs. Once again in 2018, the digitalization of processes represents real leverage for business growth efficiency and productivity.



3.2.4/PRODUCTION SYSTEM AND LEAN APPROACH

INglass-HRSflow equipment is among the most advanced technologically in Europe, availing itself of state-of-the-art technologies and systems. The company has invested significant resources for robots and automated lines that allow for a 24/7 work output, ensuring greater precision, reliability and stability to the production process. Even so, customization of the processes allows the company important manufacturing flexibility, while still maintaining a high level of efficiency and the ability to produce carefully controlled, standard components. A fundamental and strategic aspect of the company was the choice to replicate the "Italian formula" in Asia and America. The production sites in Hangzhou (China) and Grand Rapids (USA) are perfect replicas of the Italian site. They were equipped with the same machinery used in Italy. The quality of the product and the same procedures were applied and precisely followed. Employees were trained to be able to work with the same methods and software as in the parent company. In keeping with what was done in previous years, the company has continued with the implementation of Lean Production, a lean manufacturing system based on the optimization of flows, waste reduction and the uses of consolidated methods to determine what is essential in contributing to efficiency and effectiveness with respect to the end result. As a result, the manufacturing

process and product design have been treated comprehensively, minimizing the complexity of production. Intervening and optimizing all phases and resources ensures production is not wasted on any objective other than that which creates value for the customer. In particular, the unification of the WW managerial platform in 2016 highlighted the company's ability to face the challenges of globalization of services for our customers. The company has worked diligently on optimizing the flow between plants, making the most of opportunities derived from the complete integration in the framework of information and logistics flow. The continuous need for improvement has led the company, in 2017, to establish a new team in its various plants that is focused primarily on the efficiency of individual manufacturing strategies and the consolidation of the results obtained.



LEAN THINKING

3.2.5/MARKETING AND COMMUNICATION

The main communication tools used by the INglass group are: participation in trade fairs and industry events, sponsorship of targeted conferences, organization of technical days aimed at potential and current customers, the company website, planning of targeted email marketing campaigns, and a presence in the major industry magazines with editorials and advertising campaigns.

Marketing also supports the sales force which interfaces with the customer through the provision of all explanatory product documentation, including: presentations, technical data sheets, manuals, product catalogues and a collection of significant case studies.

The company's presence in specific sectorial magazines and in institutional publications is handled internally, based on the product lines to be advertised or the countries to be targeted. Planning for advertising on specialized press media is strategically defined year by year. Although in some product sectors trade fairs and events are facing strong cost containment policies, in a highly technological markets as ours they continue to be a fundamental global showcase and an advantageous occasion to exchange know-how and experience. Trade fairs, especially those on an international level, remain the main tool for launching new products and penetrating new markets.

At the same time, INglass has not only intensified its presence at targeted events such as Technical Day and Conferences, and it has also been involved in organizing technical Open Houses to introduce its technologies up close. These targeted events have proven useful in reaching a more homogeneous customer base and in establishing relationships and partnerships more easily. Among the events organized by the company in 2018, the HRSflow China 10 years anniversary & technical open house has been the most valuable one. For HRSflow China, 2018 was a special year: 10 years ago, our manufacturing plant was opened to closely support our Asian customers. For the occasion of HRSflow China 10 years anniversary, the company has organized a Technical Open House that took place in Hangzhou facility. The event, in cooperation with Krauss Maffei, Sabic, Piovan, JSC Automotive, was opportunity to invite the customers visit the renovated facility equipped with cutting-edge technologies for Asian Markets.

The key player of the technical day was FLEXflow, the servo-driven valve gate systems. After some technical presentations by industry professionals (such as

suppliers of plastic material, injection molding machine manufacturers, or other project partners), customers were able to watch FLEXflow live molding demonstrations of a front plated grille produced in a single shot. The breakthrough technology for dimensional stability and family molds. An unmissable opportunity to experience our innovative melt management solutions for Class "A" surface finish. Again, with reference to industry events, an important role is played by the strategic partnerships made with manufacturers of injection molding machines, and with the customers themselves. Thanks to these collaborations, the company can showcase up close the performance of its hot runner systems and the quality result of the final molded piece. In 2018, during some of the most important international trade fairs, as NPE and Chinaplas, the HRSflow hot runner division partnered with several injection molding machine manufacturer such as ENGEL, Sumitomo Demag, Wittmann Battenfeld, Krauss Maffei and Yizumi. The IMM producers installed FLEXflow systems on their presses and carried out live molding demonstrations, thus allowing customers to experience first-hand the benefits of this technology. Furthermore, in 2018 the company continued to invest in online communications, with an effective web marketing strategy to support the traditional communication tools. Each of the organized open houses, for example, was publicized and disseminated through effective online advertising on the company's website, strategic presence on social networks planning of email marketing campaigns and the design of a dedicated Landing Page. A combination of these elements has been crucial for the success of each event. We increased a lot our presence on LinkedIn, that's becoming the main social network for btb activities. In 2018, the company also took full advantage of the three prototype molds grille, lenses and spoiler. These molds, all equipped with the FLEXflow system, have been delivered worldwide, even directly to the customer's location in order to carry out tests and see first-hand the benefits of this solution. Moreover in 2018 we realized a new family mold for one-shot production of three very differently sized components of a car door module. The precise and responsive FLEXflow technology allows for low-warp, defect-free parts with finely grained surfaces.

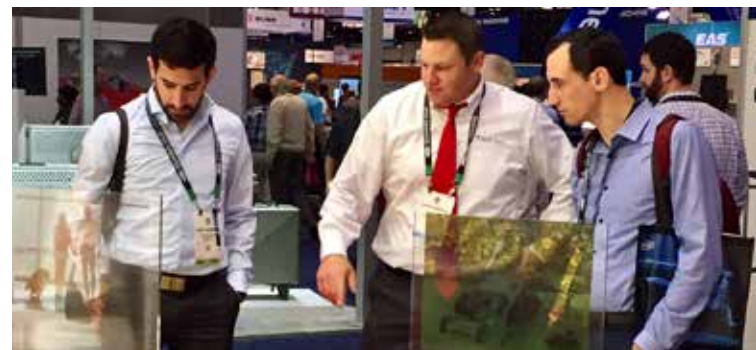
> Events

- **Plastics in Automotive 2018**
Detroit (USA), 15-16 January
- **AMBA National Conference and Open House**
Grand Rapids MI (USA) , 14-16 February
- **Automotive Meetings Bucarest**
Romania, 13- 15 February
- **VDI Conference Injection Moulding 2018**
Baden Baden Germany, 20-21 February
- **Molding Conference 2018**
Charlotte, N.C (USA) , 27th February -1st March
- **29th IKV International Colloquium**
Aachen Germany, 28th – 1st March
- **AKZEDIS Meeting**
San Polo di Piave IT, 7th – 8th March
- **VDI conference: “PIAE 2018”**
Mannheim Germany, 14th – 15th March
- **ARBURG Technology Days 2018**
Lossburg Germany 14th – 17th March
- **HRSflow China 10 year anniversary & technical open house**
Hangzhou China, 20th March
- **ENGEL Inject Forum**
Schwertberg Germany, 20-21st March
- **Aachen Polymers Optics Days**
Aachen Germany, 10th and 11th April
- **6th Polymer Forum of Ter Plastics Polymer Group**
Herten Germany, 17th April
- **VDWF Annual Member Meeting**
Aichach Germany – 26th April
- **ENAFER 2018**
Caxias do Sul Brazil, 17th – 18th May
- **CONNECT! European Moldflow® User Meeting**
Frankfurt Germany, 5th -6th June
- **HRSflow Partner of Krauss Maffei Competence Forum 2018**
Munich Germany – 6th – 7th June
- **wfb Werkzeug- und Formenbau Trade Fair**
Augsburg, Germany, 12th -13th June
- **MID Molding Innovation Day 2018**
Parchi del Garda, Italy , 14th June
- **Plastics Meeting Lyon**
Lyon France, 19th-20th June
- **SKZ Network Day**
Wurzburg Germany, 21st June
- **“Material meets Engineering” conference of LYB**
Frankfurt Germany, June 26th
- **Business Mission “Intelligent Manufacturing technology for the EV supply chain”**
Hangzhou Bay-China 29th to the 30th of June
- **Aichach Plastics Days**
Aichach Germany, 12th -13th July
- **ENGEL optimeit 2018**
Shanghai, China 18th – 19th -20th July
- **Moldex 3d Technology Conference 2018**
Paris France, 25th to 26th September
- **Injection 360°- Trends in Plastics Molding 2018**
Queretaro, Mexico. 26th to 27th September
- **Automotive Glazing Summit**
Berlin Germany, 27th – 28th September
- **HRSflow Tech Days Russia**
Russia, 19th – 25th October
- **Trendscout Engel China**
Shanghai China, 24th-25th October
- **XXIII International Symposium On Plastics Technology**
São Paulo, Brazil, 31st October
- **ISTMA Europe Meeting**
Milan Italy , 7th -8th November
- **Automobilwoche Congress**
Berlin Germany, 7th -8th November
- **CPRJ Automotive Conference**
Chongqing China, 8th-9th November
- **XXII Conference of Plastic Material**
Parma Italy , 15th November
- **Kruass Maffei Yuyao Seminar**
Yuyao China, 6th November



> Trade Fairs

- **CHINAPLAS**
Shanghai China, 24th -27th April
- **Die & Mould India**
Mumbai India, 14th April
- **NPE**
Orlando FL, USA booth W991 – 7th-11th May
- **PLASTPOL**
Kielce, Poland, 22nd -25th May
- **Plast Milano**
Milano Italy, 29th May- 1st June
- **AMERIMOLD**
Novi MI, (USA) Booth 125, - 13th – 14th June
- **INTERMOLD**
Nagoya Japan 13th -16th June
- **KUTENO**
Rheda-Wiedenbrück Germany, 5th -7th June
- **MSV**
Brno Czech Republic, 1st – 5th October
- **Fakuma**
Friedrichshafen Germany, 16th -20th October
- **EMAF**
Porto Portugal, 21st -24th November



3.3 / Community

Transparency and fairness are key and essential concepts in relationships with the community. Community for us means:

- Trade associations
- Schools and Universities
- Institutions
- Local community
- Press and media

3.3.1/TRADE ASSOCIATIONS

From the end of 2016 we have been sponsoring the International Association Istma World, International Special Tooling and Machining Association. A body that groups together the main associations of moulders all over the world.



ITALY

- CONFINDUSTRIA. We have been partners with Confindustria for many years, the main association that represents manufacturing and service companies in Italy, which are more than 150,000 companies of all sizes. The local association that we refer to is Unindustria Treviso.



- ASSOCOMAPLAST of Assago, Milan, renamed AMAPLAST in 2018, today groups 165 companies that manufacture equipment for the processing of plastics and rubber. AMAPLAST publishes the trade magazine Macplas, organising the Plast trade fair in Milan and provides training in collaboration with Cesap.



- PROPLAST of Tortona, Alessandria, today groups together 202 companies and bodies and is a technological excellence centre in Europe, offering high quality R&D services and leading edge training in the processing of plastic materials, materials and product engineering.



BRAZIL

- ABINFER, National Moulding association Brazil. Founded in 2011 in Joinville, Santa Catarina. The association represents the Brazilian moulding industry at the national and international institutions, also providing training, technological and managerial consultancy services.



CANADA

--- APMA, Automotive Parts Manufacturers' Association. National Canadian Association founded in 1952. Represent OEM component, equipment, machinery and service producers for the global automotive industry. The main purpose of the association is to promote the industry supplying OEMs in the automotive industry, both domestic and foreign. Its carries out business promotion, representation, support and organises periodic global marketing activities. The association also maintains constant relations with equivalent associations in other countries.



--- CAMM, Canadian Association of Mould Makers. Canadian National Association founded in 1981. Represents mould manufacturers and promotes various activities (communication and field studies, innovation and new technologies and training) for the protection and development of local producer networks.



--- SPI, the Plastic Industry Association. Founded in 1937, it promotes growth in the U.S. plastics industry. Representing nearly 900,000 American workers in the third largest U.S. manufacturing industry, SPI delivers advocacy, market research, industry promotion, and the fostering of business relationships and zero waste strategies. SPI also owns and produces the international NPE trade show. All profits from NPE are reinvested into SPI's industry services. vengono reinvestiti nei servizi all'industria della SPI.



USA

--- A.M.B.A - American Mould Builders Association. An association founded in 1973, it is involved solely in the part of the plastic industry dealing in mould manufacturers. Its members are companies that build moulds and dies for injection, blow, compression, thermoforming moulding and other moulding applications.



--- OESA Original Equipment Suppliers Association strives to foster collaboration throughout the supply chain and help members make critical business decisions. Its mission is to champion the business interests of automotive original equipment (OE) suppliers through industry events, peer group councils, research and analysis. Since 1998, the Association has been addressing issues of common concern and advocating on behalf of the supplier community throughout the supply chain and in Washington, D.C. OESA is a non-profit trade association and one of four divisions of the Motor & Equipment Manufacturers Association (MEMA).



CHINA

- CDMIA, China Die & Mould Industry Association. Established in 1984, CDMIA is the only national association for this sector in China. Mainly consisting of individual firms that are voluntary members, research centres, universities, colleges and social institutions related to the world of moulds and moulding. It currently brings together over 1,500 members and has 50 branches in the individual cities and major industrial centres. CDMIA is a founding member of FADMA as well as a member of Istma/Fadma. Over the years CDMIA has established excellent relationships with important moulding industry entities in various countries and regions.



GERMANY

- VDWF, Verband Deutscher Werkzeug und Formenbauer. The German moulding company, which was founded in 1992, groups the leading moulding companies present in the area. It lobbies and raises awareness of the requirements in the sector, offers cross services to members and represents a network of constant comparison and sharing between the companies in the sector.
- IKV, Association for the promotion of the plastic processing Institute. The association, based in Aachen, was founded in 1950 and now involves approximately 250 companies from the plastic sector, from all over the world. Its mission consists in protecting the competitiveness of the plastic industry in a growing global market. The members of IKV, through their cooperation with the institute, are able to benefit from new technological developments from the very first phases of applicability.
- SKZ, Das Kunststoff Zentrum. SKZ has been a partner of the plastic industry for over 50 years. SKZ, one of the major accredited institutes for quality certification, supervision of more than 900 products for more than 400 companies. SKZ also performs its own research and development, it offers consultancy and training services for collaborators in the plastic sector. Its main headquarters are in Würzburg but it also controls many branches in other areas of Germany, in the UAE and China.



--- KUNSTSTOFF-INSTITUTE LÜDENSCHIED

The Kunststoff-Institut Lüdenschied was established in 1988. It is DIN EN ISO 9001 certified and has been equipped with an accredited test lab according to DIN EN ISO/IEC 17025 standards since 2000. The Institute collaborates with more than 100 specialists in materials, processes, tooling, surface engineering, process and testing technologies. They have 12 injection molding machines (8 of which are equipped with insert and parts removal automation), a Thermoset processing competence center, more than 100 devices for material, finished parts and surface testing, and many other instruments available for companies of the plastic industry. KI can support its members in the selection, development, optimization and realization of products, tooling and processes, across the entire range of plastics technology, in research and development, and in training.



- KNF – the Kunststoff-Netzwerk association based in Franken is a platform to exchange information within the plastics industry. It aims to pool professionals in workshops and expert meetings, inform them about latest developments in our industry and to offer the possibility to build up a personal network within the association. All events are aimed at strengthening the companies' efficiency and, as a result of these activities, to increase their competitiveness.



- ACS - Automotive Center South Westfalia. A network of companies and institutions that through a platform communicate, inform and work in committees, plan events and joint projects on the future topics of the automotive industry and automotive engineering. ACS is moreover closely connected to the Competence Center Vehicle Electronics (KFE) in Lippstadt and the AutoCluster.NRW, as well as to Europe-wide project partners and research institutes.



PORTUGAL

- CEFAMOL, Portuguese Association of the Plastics Industry. Founded in 1969 by 7 companies in the plastics industry, it is now the largest national association and represents the interests of this part of the industry, in terms of relations with the Institutions and with other associations, both national and foreign.



3.3.2/SCHOOLS AND UNIVERSITIES

For many years now we have been promoting activities and projects that aim to shorten the distances between students, schools and businesses, by investing in young people in the area, thus contributing to their education before the conclusion of their studies.

We believe that this school-company interaction is important in many respects: for the student, who is not yet familiar with the production world and its peculiarities and through these visits can gather ideas of insight and curiosity, and for the company, which through these meetings can convey the needs of the professional world to teachers and future workers, while also gaining a better understanding of the point of view of someone seeking their first job. Too often, unfortunately, there is indeed a misalignment between these two realities. Only a widespread and continuous collaboration such as this one can reduce the distances.

The main activity for running this project is the organization of meetings with the students. In Italy, during 2018, we welcomed the following visitors:

- students from the Gewerbliche Schule (Germany), which once a year brings their students to visit our company
- 5th year students from local technical high schools focused on mechanical, automation or plastics studies: Itis Galilei of Conegliano, ISIS Scarpa of Motta di Livenza, ITIS Kennedy of Pordenone.
- 2nd and 3rd year students from local middle schools

In 2017 we also launched a collaboration with the Da Vinci Scientific High School of Treviso, with the support

of Unindustria and ClubIT. The project aimed at fostering collaboration between companies and schools by engaging a group of students in the development of simple software according to real company needs and directions. We chose a project aimed at developing a software for the management of the worldwide company car fleet. Thanks to an initial company visit and the introduction of the company needs, recurrent meetings at school and supportive Skype calls, the project has been successfully implemented. The final outcomes have been: the analysis of the basic functions and the database skeleton, the project planning with storyboard, graphic simulations and functions description, the web portal to locate and book the cars available at our 3 production sites worldwide, and an Italian / English user Handbook. The students have worked on this project for more than 1 year and they have developed not only ICT skills but also team working and problem-solving abilities, so important in today's work environment.

In addition to this, for some years now we have been welcoming high school students for work-study programs. In 2018, we hosted 22 high school interns, 4 university interns, and collaborated with two graduating university students for the development of their final theses. Last year we also started a collaboration with the French University of Mines Albi and we periodically host students from their Management Engineering degree course. In 2018, in Italy, we've continued our collaborations with the local university of Padua participating to "Open Engineering", an event for work orientation and meetings with enrolled and graduating students coming from technical and scientific departments



Starting in 2018, we have decided to include all activities carried out in collaboration with schools and universities within the Meetingglass project, whose aim is to introduce students to INglass, by actively bringing these young people closer to the working world, drawing out their enthusiasm and interests first-hand.

In February of 2018, we initiated a training project - divided into 5 lessons, each lasting half a day - aimed at students in their 4th year of Technical Institutes specializing in mechanics, electromechanics, automation or plastics studies. Each training session's objective was to look in detail at a specific area of the company: Design, Quality, Operations, Production Planning, Manufacturing and Assembly, R&D. Each training session ended with an assessment test. For each business area, based on the outcome, a student was selected and given the opportunity to carry out a summer internship within the company.

3.3.3/INSTITUTIONS

We have excellent relations with local and national institutions with regard to the exchange of documentation and requests as well as in the resolution of issues of misalignment in the daily conduct of bureaucratic activities. In regard to our factory in China, the Hangzhou Economic and Technological Development Zone (Management Committee and General Union) is the Body with whom we have main business relations. Our company pursues utmost transparency and fairness even with regard to our institutional interlocutor, providing clarifications and additional data whenever a justified request is submitted.

Relationships with **Cei Piemonte** (Foreign Centre for the Internationalisation), the first Italian regional body dedicated to internationalisation of the territory are still under way. Multiple Piedmont entities are associated with Cei (the Region, the Municipality, Turin's Polytechnic, Turin University and the Chamber of Commerce) and are a reference for local businesses who work or intend to work in foreign markets and for foreign interlocutors interested in learning about Piedmont's economic system. At Cei we have been selected in the "From Concept to Car" project a prestigious project, which admits only the most innovative companies.



3.3.4/LOCAL COMMUNITY

Every year we allocate a portion of our efforts to add value to the community in which we operate. Unfortunately, there are many needs and we therefore cannot contribute to them all. We do however, try to provide our support on a rotating basis to those initiatives that seem to us the most deserving. We are always ready to welcome new collaborations and support social projects. We do this not only through donations but also by offering tangible actions of support including activities that involve our internal staff and their families. In fact, we believe that raising awareness on important social issues is just as important as providing economic support. Acting in an ethical and responsible way is not limited to "doing charity" but must also be reflected in the choices and daily actions of us all, with constant attention and respect for the needs of those less fortunate. In 2018 we also managed to provide a bit of support to some amateur sports associations in the area (soccer, basketball, cycling, mountain biking) and to a few local social initiatives. For about three years we have also been supporting "**I bambini delle fate**", a social organization that since 2005 has been engaged in marketing, social communication and fundraising to support projects and pathways for social inclusion, managed by specialized local organizations, for the benefit of children and youth with autism and other diversities. INglass, among the projects sustained by "**I bambini delle fate**", supports the Association F.a.r.c.e.l.a. that works with disabled people implementing sport and cultural initiatives useful for their rehabilitation and involvement in the society <https://www.ibambinidellefate.it/>.



ENVIRONMENTAL SUSTAINABILITY



Our processes are not considered activities with high environmental impact as we do not use products with high chemical risks. We accept and comply with environmental legislation, aware that respect and environmental protection not only concern the individual but also productive entities. For this reason, in any situation in which alternate company processes are proposed with equal end results, our choice falls on the one having the least possible impact on natural resources.

Raw materials (almost exclusively steel and copper), energy and water are at the base of our production process. Through the various stages of processing (internal and external) and surface treatments, we produce the finished product and production waste according to the diagram.

In brief, environmental impact concerns the consumption of energy, water and fuel, the storage and disposal of waste and packaging, and in a very limited way, due to the nature of our production, noise, air emissions and use of hazardous substances.

We are also fully committed to finding new technical solutions which offer energy savings, through:

- FLEXflow = a technology that allows customers to reduce the tonnage of their injection molding machines with significant energy savings in production. Thanks to this technology, it is possible to optimize polymer filling during the injection phase, resulting in a reduction of raw materials;
- The use of insulating materials and geometric profiles optimized for hot runner systems aimed at reducing thermal dispersion;
- Particular technical solutions to shape bioplastics, renewable materials to reduce the consumption of traditional materials;
- New molds and hot runner systems for the production of plastic parts with thinner walls, reducing the weight of the plastic parts and their disposal.

INPUT: RAW MATERIALS

METAL, STEEL, COPPER, BRASS

ENERGY

WATER



PROCESSING

TURNING

MILLING

ELECTRO-DISCHARGE MACHINING

LASER SINTERING

POLISHING



OUTPUT: FINISHED PRODUCT

MOULDS

INJECTION SYSTEMS

WASTE

REFUSE

WASTE WATERS

4.1 / Raw materials






Only raw materials authorized by European regulations are utilized in the production process at the Italian plant.




The steel used in all production plants is of European origin (Germany, Italy, France, Slovenia and Sweden). It is the main raw material used for the production of our product (93% of the raw material purchased).

Even if this sometimes results in a higher manufacturing cost, it guarantees a consistent level of quality in the final product.

The other raw materials used are: copper, which in 2018 represents an average incidence of 2%, brass 4%, and tungsten 1%. The rest is made of various materials including aluminium, iron and special alloys.

In the packaging of our products we use wooden crates, cardboard and various materials for insulation and protection of the product within an exterior box. A polyurethane based foam secures the product firmly inside the box, to avoid damage during transport. We continue our commitment to increasing our use of eco-sustainable materials whenever possible. In fact, wooden crates and cardboard represent the largest quantity of packaging materials, amounting to 80% of the total packaging costs in 2018.

	STEEL	
	consolidated 2016	85%
	consolidated 2017	86%
	consolidated 2018	93%
	COPPER	
	consolidated 2016	3%
	consolidated 2017	4%
	consolidated 2018	2%
	BRASS	
	consolidated 2016	3%
	consolidated 2017	6%
	consolidated 2018	4%
	TUNGSTEN	
	consolidated 2016	5%
	consolidated 2017	2%
	consolidated 2018	1%
	OTHER (TITANIUM, VESPEL, BRASS PIPE, PTFE BAR)	
	consolidated 2016	5%
	consolidated 2017	2%
	consolidated 2018	0%

	WOODEN CRATES	
	consolidated 2016	71%
	consolidated 2017	73%
	consolidated 2018	75%
	CARDBOARD	
	consolidated 2016	8%
	consolidated 2017	7%
	consolidated 2018	5%
	OTHER (POLYURETHANE, POLYSTYRENE, BUBBLE, WRAP, CELLOPHANE)	
	consolidated 2016	21%
	consolidated 2017	20%
	consolidated 2018	15%

Values shown in both tables refer to the value of the purchased product on total supply, not the quantity.

4.2 / Energy

All the production plants are powered mainly by electricity **drawn** from the national grid (for office activities, machine operation and hot water heating) and with thermal power stations fuelled by **methane gas**.

NATURAL GAS	
u.m.	m3
consolidated 2016	119.000
consolidated 2017	139.161
consolidated 2018	100.367

ELECTRICITY	
u.m.	Kwh
consolidated 2016	9.290.000
consolidated 2017	9.117.761
consolidated 2018	9.817.519

STEAM	
u.m.	GJ
consolidated 2016	9.963
consolidated 2017	4.686
consolidated 2018	0

* From beginning of 2017, only the energy consumption at production plants was measured, without including the consumption (however minimal) of the technical-commercial branches.

4.3 / Water

In the production plants, water, in addition to its sanitary use, is also used for some other processes, such as: fire safety, irrigation and cooling of factory buildings.



In Italy, all waste water other than for domestic use is collected in special tanks, in compliance with the EWC (European Waste Catalogue) classification codes. It is also differentiated according to the presence of oily emulsions and subsequently entrusted to third party companies authorized for proper disposal.

4.4 / Environment protection & management of the environmental system

INglass is committed to improving its performance also in environmental sustainability. Therefore, in relation to its own specific activities, it contributes to the promotion and development of scientific and technological research, in order to develop environment friendly products and processes with an increased focus on safety, Employee health and the protection of communities where the Company operates.

The operational management of the industrial activities, in compliance with current legislation on prevention and environmental protection adheres to the most appropriate criteria for safeguarding the environment and energy efficiency, in order to reduce its overall environmental impact.

INglass guarantees constant and timely compliance with national and international environmental legislation, promoting and implementing all reasonable initiatives aimed at compliance with legal and regulatory obligations. The Company also guarantees that the development and growth of its operations in no way jeopardizes the protection of the environment.

EMISSIONS, NOISE AND HAZARDOUS SUBSTANCES

INglass follows a recurrent emissions control and maintenance program conducted by authorized, external third-party personnel. Recurrent environmental noise analyses are performed in compliance with current local regulations for assessing risk to employees. Since the company does not perform noisy processes, it has not been necessary to carry on any additional analysis.

Following the chemical risk assessment performed at the company, substances are used and manipulated according to proper practices related to their specific level of danger.

WASTE PRODUCTION AND DISPOSAL

Waste produced in the production plants is carefully collected and disposed of.

For the most part our waste is non-hazardous, due to the type of processing we perform. To date, there have never been any spillages or contaminations to the environment. The data reported was collected from the 3 global production plants.

Of the total waste produced at a consolidated level in 2018, 68% is recyclable waste, while 21% is considered hazardous waste according to the international CER classification codes, with an incidence nearly unchanged with respect to last year. Both rates are steady when compared to 2017 numbers.

The branches also collect and recycle waste coming from office activities, in compliance with the regulations in force in each individual host country, even if it is not possible for them to trace the quantities produced and disposed of.

EWC Code	Waste description	Recyclable	CONSOLIDATED 2016		CONSOLIDATED 2017		CONSOLIDATED 2018	
			Kg Produced	Kg Delivered	Kg Produced	Kg Delivered	Kg Produced	Kg Delivered
150101	Paper and cardboard packaging	YES	21,603	21,203	26,500	27,300	18,980	17,380
150102	Plastic packaging	YES	1,680	1,600	1,630	1,730	1,460	1,320
070213	Plastic waste	YES	420	420	2,000	2,000	2,400	2,400
120105	Plastic scrap and shavings	YES	35,420	33,420	26,440	21,720	27,640	33,460
120103	Non-ferrous metal shavings and filings (mainly brass, copper and aluminium)	YES	124,817	124,817	11,637	11,637	2,233	2,233
120101	Ferrous metal shavings and filings (mainly Steel)	YES	465,420	467,990	498,760	493,500	573,950	577,210
120115	Machining sludge - graphite	NOT	2,876	1,026	4,980	6,830	4,707	4,707
150202	Filter materials	NOT	1,373	1,036	1,040	1,377	1,097	1,097
130208	Used oil	NOT	2,764	2,764	1,500	1,500	3,070	3,070
130105	Oil emulsion	NOT	101,129	103,129	88,810	94,810	99,000	90,000
150106	Mixed material packaging	NOT	75,376	75,576	75,820	75,220	105,180	106,580
150110	Empty drums with traces of dangerous substances	NOT	1,955	1,598	2,162	2,519	2,147	2,147
120301	Aqueous washing liquids	NO	77,698	80,198	100,370	104,870	102,780	94,780
160213	Discarded equipment containing hazardous parts	NOT	14	14	-	-	-	-
160214	Discarded equipment	NOT	2,699	2,699	949	949	6,187	6,187
200121	Florescent lamps and other items containing mercury	NOT	24	24	-	-	41	41
080317	Used toner cartridges *	YES	20	20	15	15	-	-
110111	Aqueous washing liquids containing dangerous substances	NOT	19,330	19,330	-	-	-	-
120109	Emulsions and solutions for machinery free of halogens	NOT	0	0	-	-	-	-
150105	Composite material packaging	NOT	0	0	-	-	-	-
170411	Cables other than those in category 170410	NOT	3,081	3,081	1,590	1,590	1,560	1,560
170405	Iron and steel	YES	0	0	-	-	14,540	14,540
160605	Other batteries and accumulators	NOT	0	0	-	-	150	150
120199	Waste not otherwise specified	NOT	144	144	253	253	-	-
080111	Waste painting and varnish	YES	14	14	5	5	6	6
120104	Dust and particulate non-iron material	NOT	8,221	8,221	4,600	4,600	-	-
150103	Wooden Crates	YES	30,060	31,060	35,300	31,920	47,100	48,480
130502	Oily sludge	NOT	0	0	-	-	-	-
100104	Light ash of fuel oil and boiler powder	NOT	-	-	138	138	-	-

*The table illustrates the quantities collected in the three production plants. Waste from the branch offices is not weighed as the quantity produced was understandably very small.

INglass S.p.A.

Via Piave, 4 - 31020 S.Polo di Piave (TV) I
Tel. +39 0422 750111 Fax. +39 0422 750301
www.inglass.it - www.hrsflow.com

