

TER MIA

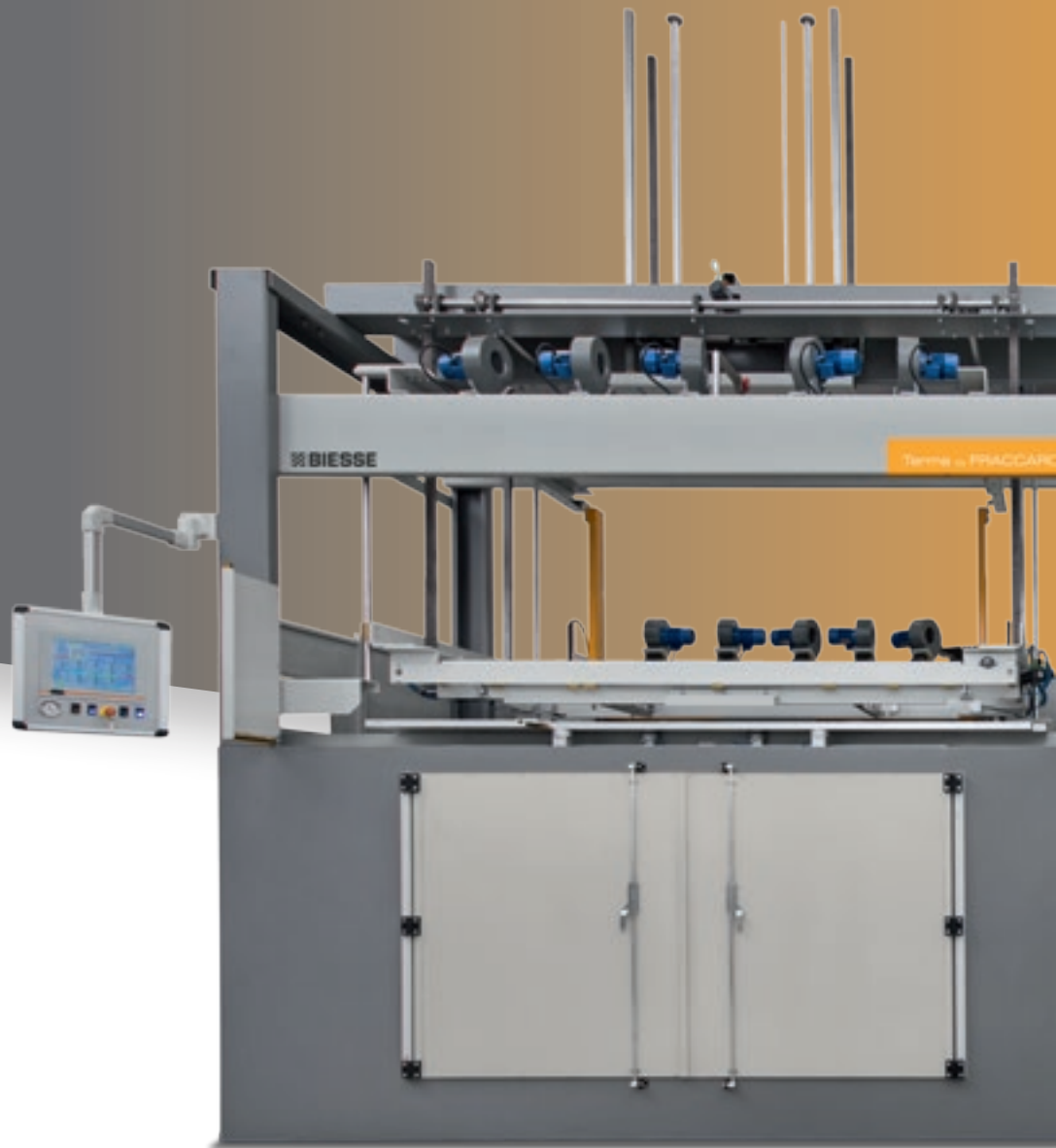
THERMOFORMER SINGLE STATION
WITH AUTOMATIC SHEET LOADING
AND UNLOADING



 **BIESSE**



TOP THERMOFORMING RESULTS



THE MARKET REQUESTS

a change in manufacturing **processes that enables companies to accept the largest possible number of orders.** This is coupled with the need to maintain high quality standards whilst offering product customisation with quick and defined delivery times.

BIESSE RESPONDS

with innovative solutions for processing technological materials.

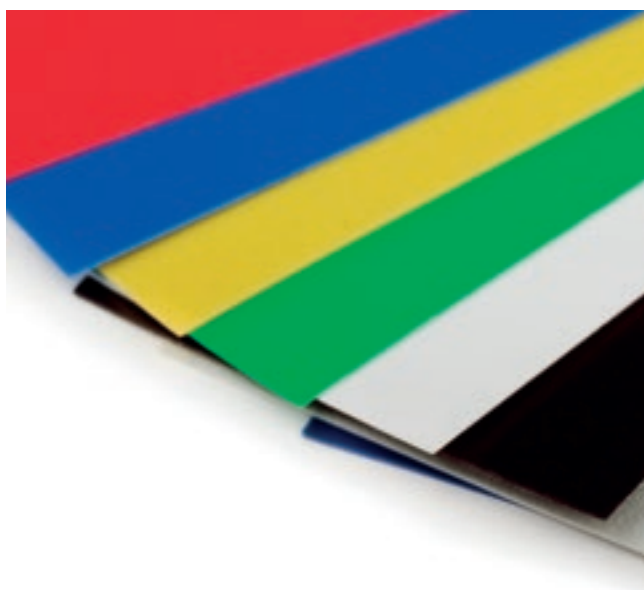
TERMA is the Biesse thermoformer conceived by Fraccaro. It's ideal for the thermoforming of plastic materials using a mould and vacuum. Sheets of varying colours, thicknesses and finishes can be used with TERMA, to meet any market need.



TERMA

- ✓ MAXIMUM RELIABILITY WITH EVERY MACHINING BATCH
- ✓ EASY, QUICK FORMAT CHANGE
- ✓ PERFECT FINISHING AND ACCURACY OF DETAILS
- ✓ TOP-OF-THE-RANGE COMPONENTS

CONTINUOUS EVOLUTION



Biesse Group, a multinational leader in the machining of wood, glass, stone and metal, is consolidating its presence in the area of machines for technological materials thanks to its purposely designed thermoforming solutions.



Biesse is focusing its technology on the thermoforming sector, with the new Terma By Fraccaro range meeting the ever more complex needs of the market. Thermoforming is a technique for shaping plastic materials using a mould and either pressure or a vacuum. It's a method that can produce even the most complex forms required by the various industrial sectors, and is a valid alternative to other, more costly moulding processes. The main application fields:

- household appliance markets
- health
- car manufacturing
- construction
- transport
- refrigerators and freezers
- toy production .

MAXIMUM RELIABILITY WITH EVERY MACHINING BATCH

**TERMA IS A THERMOFORMER CONSISTING
OF AN EXTREMELY EASY AND EFFICIENT
PIECE MANAGEMENT SYSTEM THAT
WORKS AUTOMATICALLY**

EASY PIECE LOADING AND UNLOADING.

The sheets are automatically loaded with the aid of suction cups. The loading station is equipped with devices for aligning and centring each sheet to guarantee its precise positioning in the forming area.

Easy, quick format change.

The mould is loaded on the pull-out table and clamped at the base, ensuring optimum ergonomics and safety for the operator. The automatic recognition of the mould speeds up machine tooling times

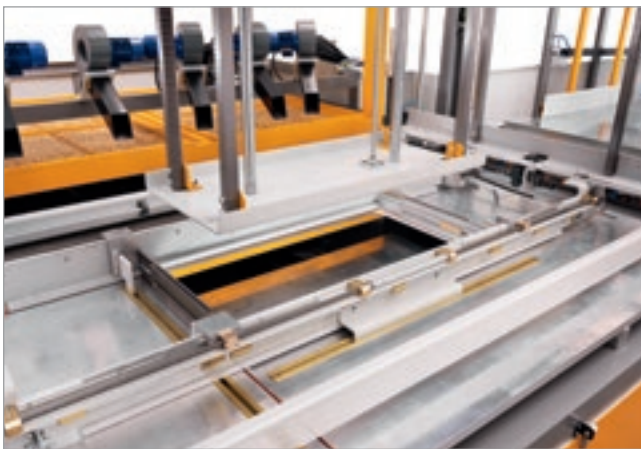




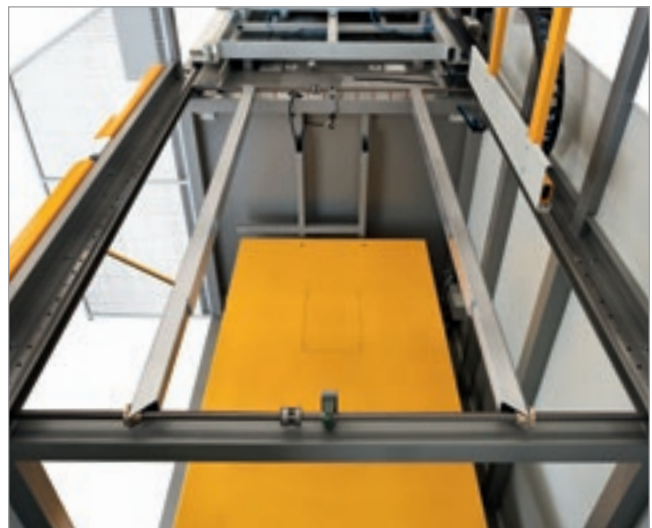
PERFECT FINISHING AND CUTTING ACCURACY



A sheet-presser with automatic adjustment clamps. The sheet perfectly, ensuring perfect finishing. Fans to cool the piece during the finishing phase.

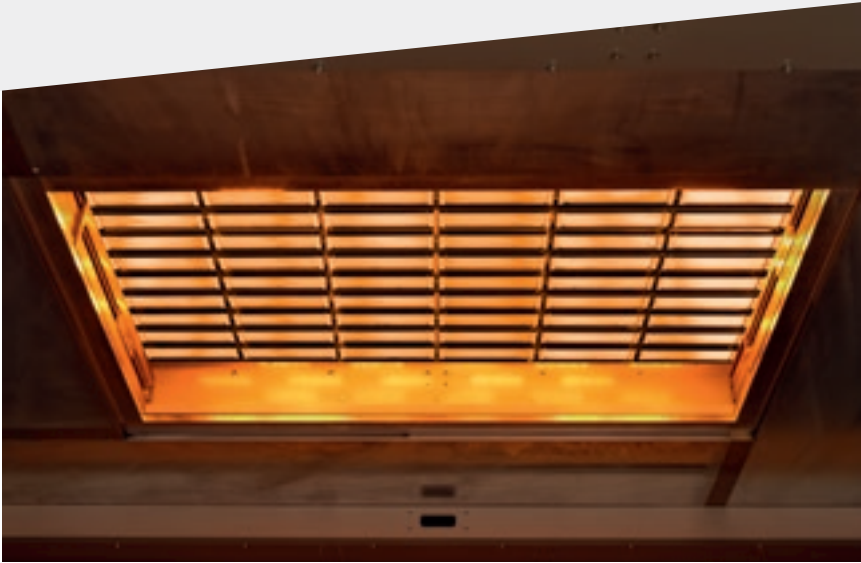


An adaptation plate allows even small sheets to be clamped automatically.



Centring device for automatic sheet positioning

TOP-OF-THE-RANGE COMPONENTS



Quartz heating element for heating the sheet to be processed.



Excellent efficiency thanks to the halogen heating element that not only reaches a high temperature very quickly but also lowers its temperature when not in use, which translates as good energy savings.



The Termo camera detects the moment when the sheet is evenly heated on all sides, guaranteeing the excellent quality of the end product.

Balloon photocell.
Automatic control of the inflation and pre-blowing balloon to guarantee the correct distribution and heating of the material.

The technological components and continuous production process improvements ensure top quality levels for customers.

SERV ICE & PARTS

Direct, seamless co-ordination of service requests between Service and Parts. Support for key customers from specific Biesse personnel, in-house and/or at the customer's site.

BIESSE SERVICE

- ▣ Installation and start-up of machines and systems.
- ▣ Training centre for Biesse Field technicians, branch and dealer personnel, and training directly at customer's site.
- ▣ Overhaul, upgrade, repair and maintenance.
- ▣ Remote diagnostics and troubleshooting.
- ▣ Software upgrade.

500

Biesse Field engineers in Italy and worldwide.

50

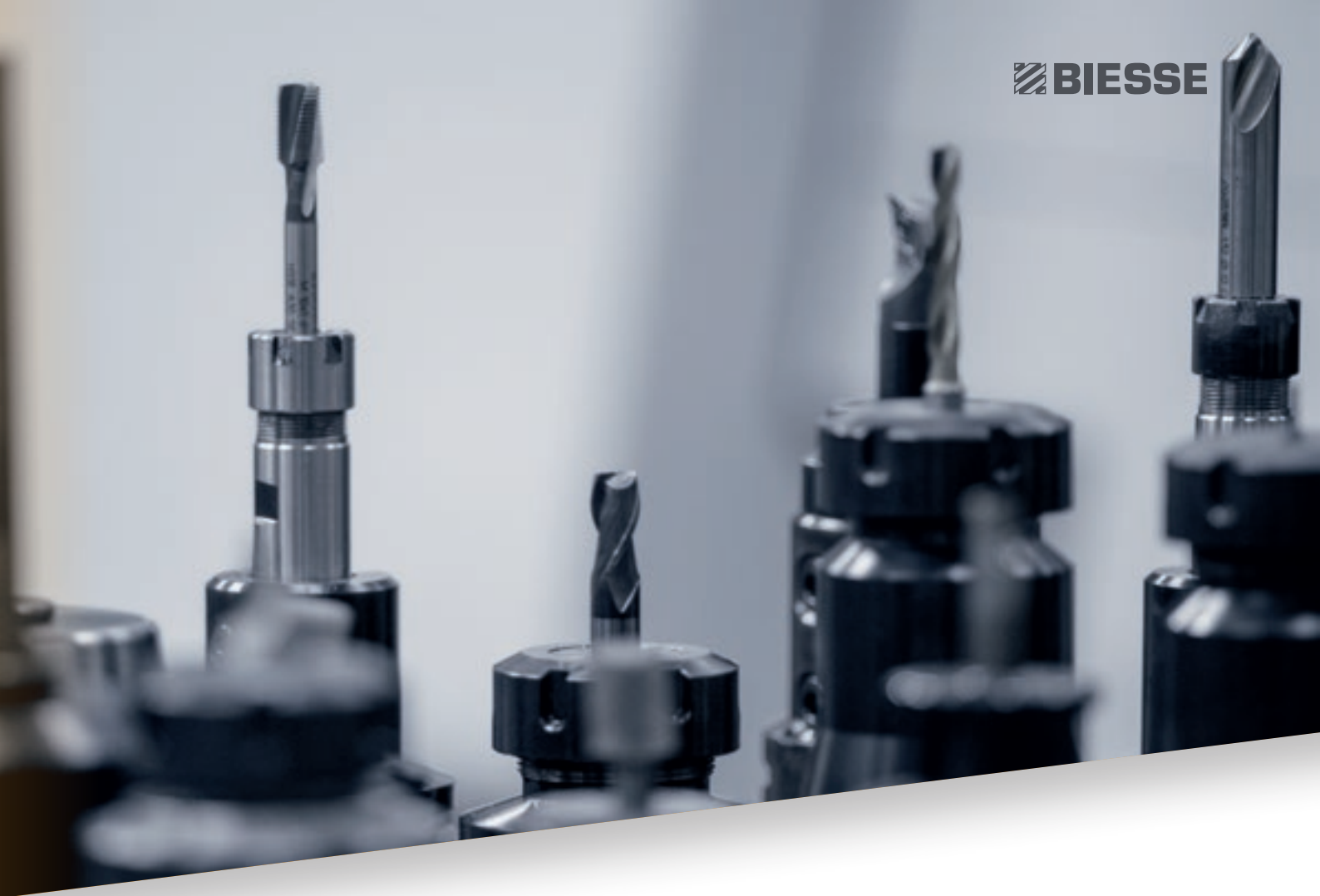
Biesse engineers manning a Teleservice Centre.

550

certified Dealer engineers.

120

training courses in a variety of languages every year.

A close-up photograph of several metal drill bits and tool components, arranged in a row. The bits are of different sizes and designs, some with standard double-flute and others with more complex, multi-fluted designs. They are set against a blurred background, highlighting their metallic texture and sharp edges.

The Biesse Group promotes, nurtures and develops close and constructive relationships with customers in order to better understand their needs and improve products and after-sales service through two dedicated areas: Biesse Service and Biesse Parts. With its global network and highly specialised team, the company offers technical service and machine/component spares anywhere in the world on-site and 24/7 on-line.

BIESSE PARTS

- Original Biesse spare parts and spare kits tailored to each machine model.
- Spare part identification support.
- Offices of DHL, UPS and GLS logistics partners located within the Biesse spare part warehouse, with multiple daily pick-ups.
- Order fulfillment times optimised thanks to a global distribution network with delocalised, automated warehouses.

92%
of downtime machine orders fulfilled within 24 hours.

96%
of orders delivered in full on time.

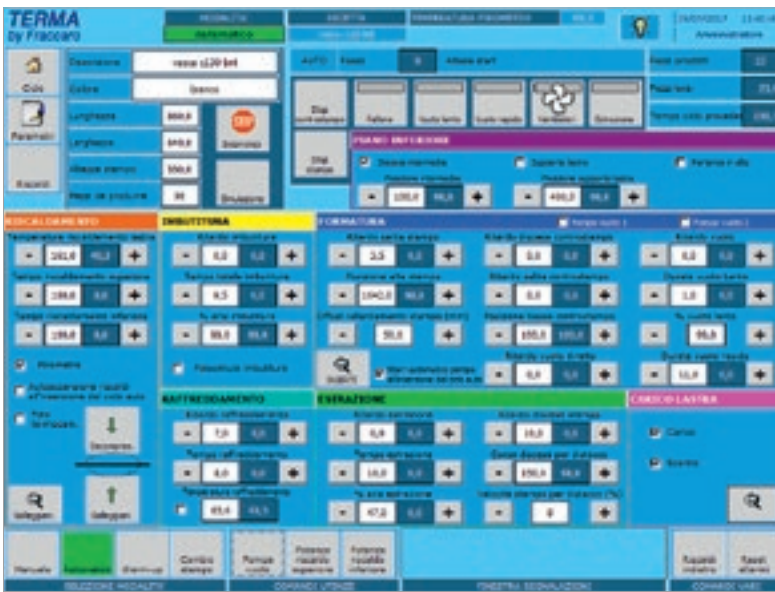
100
spare part staff in Italy and worldwide.

500
orders processed every day.

TECHNOLOGY AT THE SERVICE OF THE USER



Simple Windows interface with quick visualisation of all the process and production parameters. Siemens and Festo components.



TECHNICAL DATA

WORKING FIELD	X	Y	Z (*)
TERMA BY FRACCARO 1208	1200	800	500
TERMA BY FRACCARO 1208	1200	800	800
TERMA BY FRACCARO 1512	1500	1200	800
TERMA BY FRACCARO 2015	2000	1500	800
TERMA BY FRACCARO 2015	2000	1500	1000
TERMA BY FRACCARO 2515	2500	1500	800
TERMA BY FRACCARO 2515	2500	1500	1000
TERMA BY FRACCARO 3020	3000	2000	1300
TERMA BY FRACCARO 4525	4500	2500	1300

(*) Automatic loader

The technical specifications and drawings are non-binding. Some photos may show machines equipped with optional features. Biesse Spa reserves the right to carry out modifications without prior notice.

Weighted sound pressure level A (LpA) during machining at the operator's workstation on the vane-pump machine Lpa=79dB(A) Lwa=96dB(A) Weighted sound-pressure level A (LpA) at the operator's workstation and sound power level (LwA) during machining on the cam-pump machine Lwa=83dB(A) Lwa=100dB(A) Measurement uncertainty K dB(A) 4.

The measurement was carried out in compliance with UNI EN 848-3:2007, UNI EN ISO 3746: 2009 (sound power) and UNI EN ISO 11202: 2009 (sound pressure levels at workstation) during panel machining. The noise levels shown are emission levels and do not necessarily correspond to safe operation levels. Despite the fact that there is a relationship between emission and exposure levels, this may not be used in a reliable manner to establish whether further measures need to be taken. The factors determining the exposure level for the workforce include length of exposure, work environment characteristics, other sources of dust and noise, etc. i.e. the number of other adjoining machines and processes. At any rate, the above information will enable the operator to better evaluate dangers and risks.

BIESSE MACHINING CENTRES FOR PROCESSING TECHNOLOGICAL MATERIALS

CNC - PLAST



VERTICAL MACHINING CENTRE

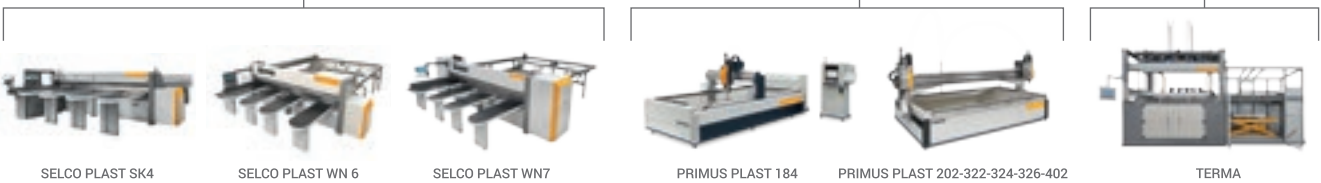
CNC - MATERIA



PANEL SAWS

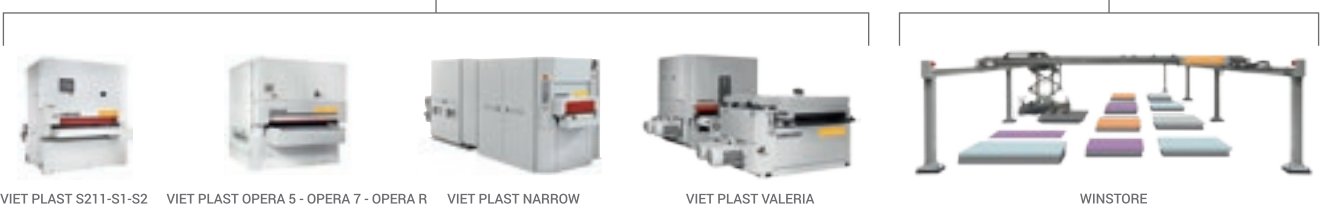
WATERJET CUTTING SYSTEMS

THERMOFORMING

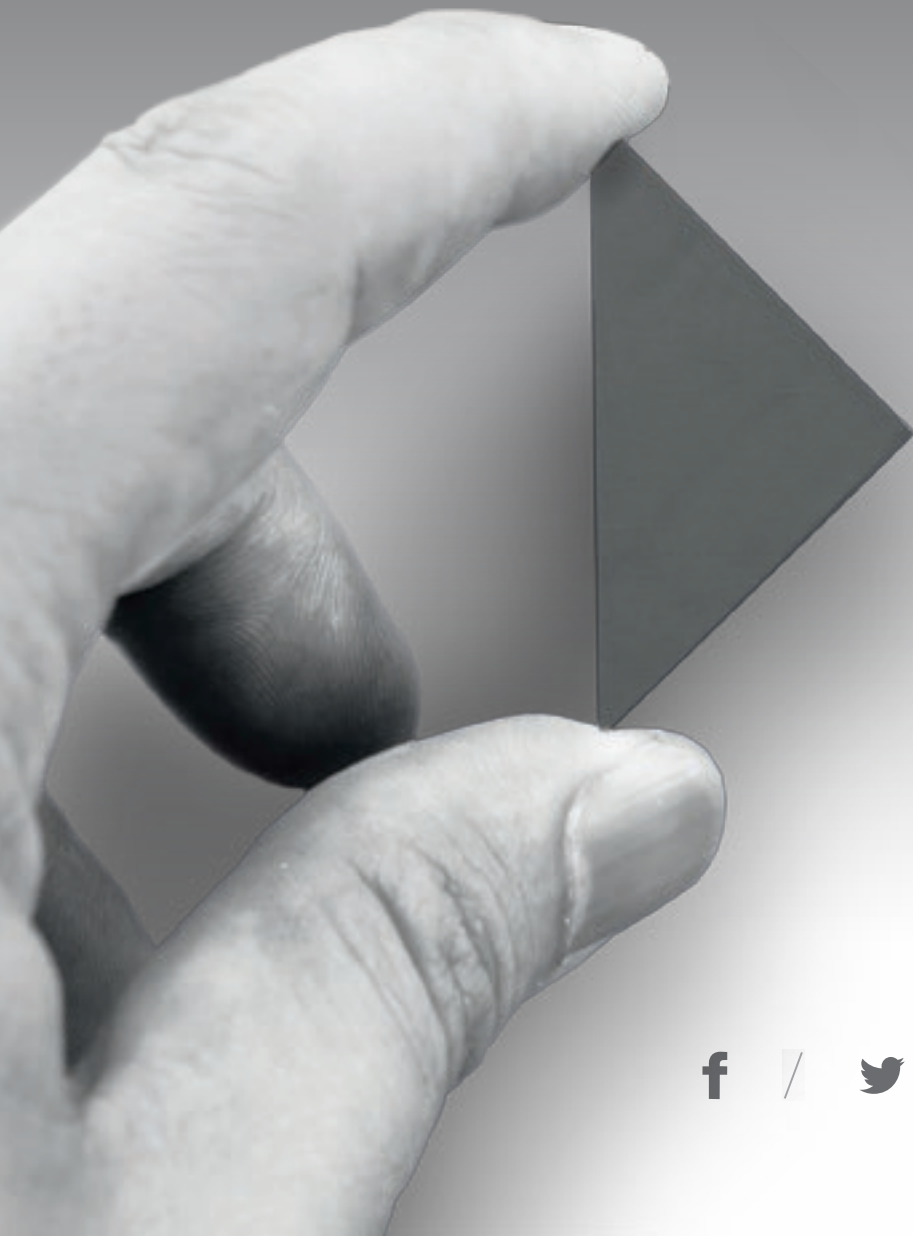


SANDING

HANDLING



LIVE THE EXPERIENC



BIESSEGROUP.COM



E



Interconnected technologies and advanced services that maximise efficiency and productivity, generating new skills to serve better our customer.

LIVE THE BIESSE GROUP EXPERIENCE AT OUR CAMPUSES ACROSS THE WORLD.

 **BIESSEGROUP**

