

TER MA

**THERMOFORMER SINGLE STATION
WITH AUTOMATIC SHEET LOADING
AND UNLOADING**



 **Biesse**



TOP THERMOFORMING RESULTS



THE MARKET REQUESTS

more ways to develop and increase production capabilities **to allow for a higher number of orders to be taken and delivered.** This need is coupled the requirements of maintaining high quality standards whilst offering product customisation with quick and defined delivery times.

BIESSE RESPONDS

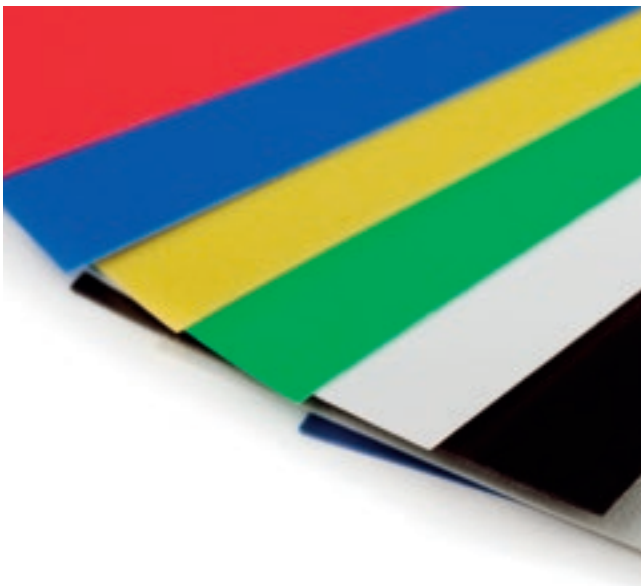
with innovative solutions for processing technological materials. **TERMA** is the Biesse thermoformer conceived by Fraccaro. It's ideal for the thermoforming of plastic materials using a mould and vacuum. Sheets of varying colours, thicknesses and finishes can be used with TERMA, to meet any market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

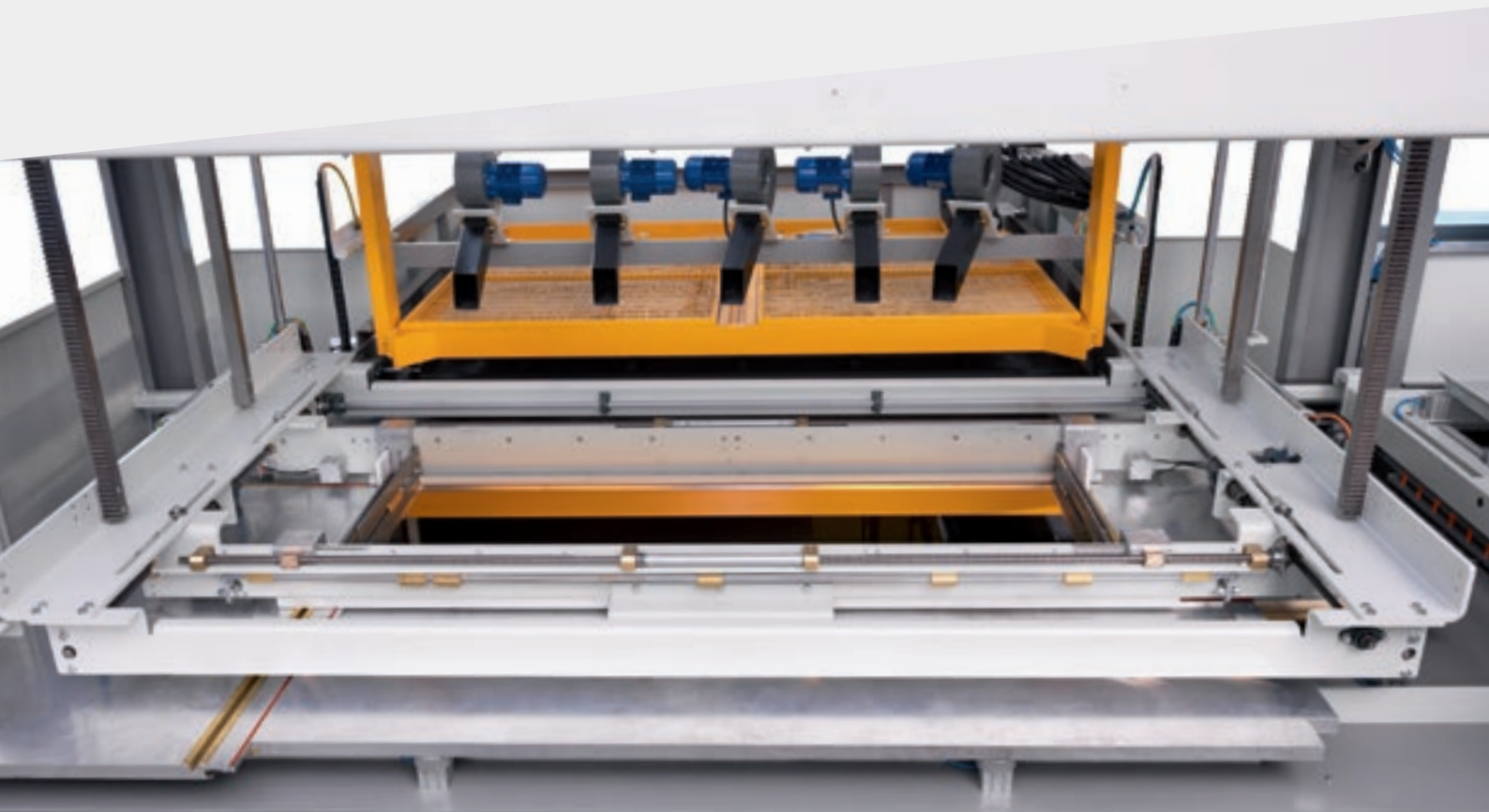
Easy, quick format change.

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

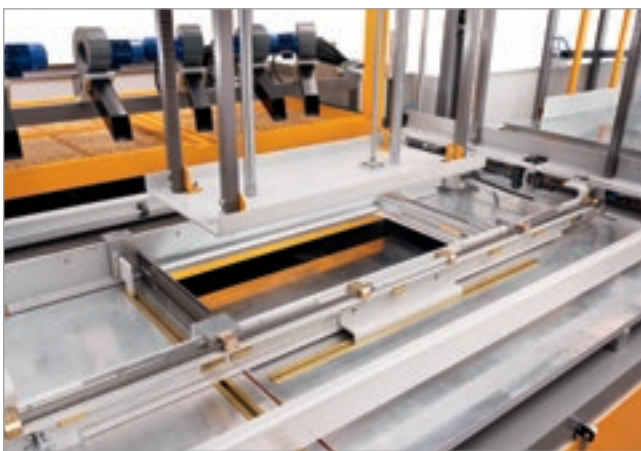




PERFECT FINISHING AND CUTTING ACCURACY



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 due to a halogen heating element that not only reaches a high temperature very quickly but also lowers its temperature whilst not in use, resulting in considerable energy savings.



The Thermal Imaging 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.

CUSTOMER CARE IS WHO WE ARE

SERVICES is a new experience for our customers, to offer not just excellent technology but the added value of an increasingly direct connection with the company, the professionals who work there and the experience they embody.



ADVANCED DIAGNOSTICS

Digital channels for remote interaction online 24/7. Always ready to intervene on-site seven days a week.



A WORLDWIDE NETWORK

39 branch offices, over 300 certified agents, retailers in 120 countries, and spare parts warehouses in America, Europe and the Far East.



SPARE PARTS AVAILABLE IMMEDIATELY

Identification, shipping and delivery of spare parts for every need.



EVOLVED TRAINING OPPORTUNITIES

Lots of on-site, online and classroom training modules for personalised growth.



VALUABLE SERVICES

A wide range of services and software packages to help our customers achieve continuous improvements in performance.

AN EXCELLENT LEVEL OF SERVICE

+550

HIGHLY SPECIALISED
TECHNICIANS AROUND
THE WORLD, READY TO HELP
CUSTOMERS WITH EVERY
NEED

90%

OF MACHINE DOWN CASES
WITH RESPONSE TIME
UNDER 1 HOUR

+100

EXPERTS IN DIRECT
CONTACT THROUGH
REMOTE CONNECTIONS
AND TELESERVICE

92%

OF SPARE PARTS ORDERS
FOR MACHINE DOWNTIME
PROCESSED WITHIN 24
HOURS

+50.000

ITEMS IN STOCK IN THE
SPARE PARTS WAREHOUSES

+5.000

PREVENTIVE MAINTENANCE
VISITS

80%

OF SUPPORT REQUESTS
SOLVED ONLINE

96%

OF SPARE PARTS ORDERS
DELIVERED IN FULL ON TIME

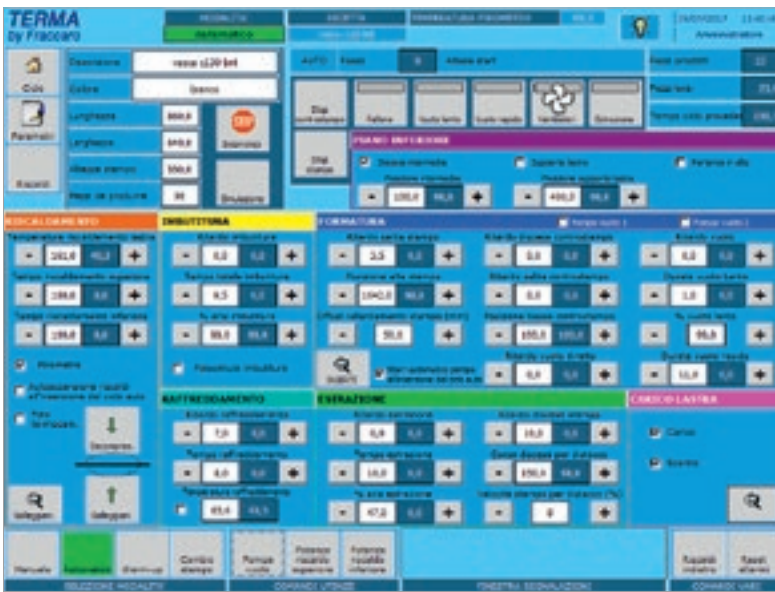
88%

OF CASES SOLVED WITH
THE FIRST ON-SITE VISIT

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.

MADE WITH BIESSE

CROSA: EVOLVING IN THE FOOD & BEVERAGE SECTOR WITH PRECISION AND VERSATILITY

Crosa has a fifty-year history in the distribution of industrial technical components and is known for its high quality service. The company from Piedmont is constantly growing and innovating and is a strategic partner in various industrial manufacturing settings, especially the food, beverages and packaging sector. At the dawn of the new millennium, it transitioned from being a parts dealer for cars to selling industrial components. In 2008 the company inaugurated a new machining operations department dedicated to plastics: a new business and the beginning of a long-term partnership with Biesse. "These days CROSA mainly operates as a sales company, but that's not all we are. We also have a manufacturing unit dedicated to the production of plastics for the mechanical sector, and the food & beverage sector accounts for 90% of our activities," explained CROSA owner Giovanni Sartore. The company purchased two Biesse machines in 2018: a 3-axis

machining centre, the Rover Plast A FT, and a 5-axis machining centre, the Materia CL. "Purchasing these machines boosted our machining quality and our ability to respond to the needs of our customers. Thanks to these technologies, we've been able to raise the level of complexity of the components we make", Sartore continued.

Precision machining, versatility and the capacity to cover every step in the creation of industrial technical components are some of the main advantages offered by the two Biesse machining centres. "We can guarantee the following machining phases for our customers: supplying the raw materials, supplying cut materials and supplying items processed from sheets of raw material. More specifically, thanks to the Rover Plast A FT we can obtain advanced nesting, while our pride and joy, the Materia CL, has opened us up to the processing of advanced materials, especially for the food sector", explained

Lorenzo, CROSA Production Manager. The company provides precise machining, milling and tapping for components used in the food & beverage sector. "Ever since we started using the Biesse machines, we've been able to offer higher quality and greater flexibility for our customers", Lorenzo stated in closing. The industrial technical parts sector is full of challenges and opportunities: the production of complex industrial parts requires ultimate precision, a distinctive trait of Biesse technology. "By opting for Biesse machining centres, we've introduced extremely innovative technology that allows us to satisfy requests entailing the machining of parts with complex shapes, sizes and materials, ensuring elevated precision, quality and reliability for our customers. I consider Biesse a partner for the coming future. The challenges will be increasingly complex, but I believe we'll have no trouble rising to the occasion together", Sartore concluded.



Founded in Italy,
international native.

We simplify your
manufacturing
to make the process
of any material



ur g process potential I shine.

We are an international company that manufactures integrated lines and machines to process wood, glass, stone, plastic and composite materials and what will come next.

Thanks to our rooted competence nurtured by an ever-growing worldwide network, we support your business evolution – empowering your imagination.

Master of materials, since 1969.

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Biesse world.

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