

ELITE ZERO

For micromechanics



ELITE ZERO

MICROMECHANICS @ 0,3mm

ELITE ZERO is an automatic bar feeder for bars of diameter 0.3 to 3 mm, suitable for sliding headstock lathes.



A HISTORY OF SUCCESS

People, Skills, Innovations and Investments have made IEMCA the Worldwide LEADER



The first IEMCA bar feeder, model A, is officially presented at Milan's Trade Show.

IEMCA develops the CS 110 for sliding headstock lathes: it is the first bar feeder able to work bars of 0.8 mm diameter.

IEMCA launches the first bar feeder in the world for multi-spindle turning machines equipped with a revolutionary patent: the "double bar pusher" or "pre-feeding".

IEMCA develops TAL: the first bar feeder in the world equipped with lubrication inside the guide channel.

IEMCA BOSS is born and defines the market standard: it is the first bar feeder with full electronic control.

IEMCA develops SIR: the first integral bar feeder for multi-spindle turning machines equipped with guide channels of variable diameter, thanks to the use of "sprockets" (IEMCA patent).

IEMCA expands its range of products for small diameter bars, adding the CH model.



MODEL A



MODEL CS



PRA



TAL



BOSS



SIR



CH

1966

1971

1979

1983

1991

1994

1995



1961

ESTABLISHMENT



4

PRODUCTION PLANTS



550

EMPLOYEES



+120.000

INSTALLATIONS



90

COUNTRIES

IEMCA launches the MASTER bar feeder that processes bars up to 80 mm in diameter with a rounded channel guide.



MASTER

1998

IEMCA presents ELITE to the market, the bar feeder for small diameter bars destined to become the benchmark for micromechanics.



ELITE

2007

IEMCA launches the SUPERFAST platform which reduces bar changeover time up to 37% and headstock idle times to zero.



BOSS HD SUPERFAST

2013

IEMCA is the first bar feeder manufacturer in the world which is able to provide Industry 4.0 technology: warning messages in case of alarm, telecontrol, teleservice, remote connection with other systems, etc.



INDUSTRY 4.0

2016

The SIR Heavy Duty is the perfect combination of: minimisation of machine life cycle costs, extreme flexibility and productivity maximization.



SIR HEAVY DUTY

2017

IEMCA launches on the market MAESTRO® 80 NO LIMITS, an automatic bar feeder able to support bars from 10 to 80 mm to work with fixed headstock lathes, ideal for those who require high performances combined with flexibility.



MAESTRO® 80 NO LIMITS

2018

IEMCA launches the first bar feeder in the world for micromechanics, able to handle 0.3 mm bars.



ELITE ZERO

2018

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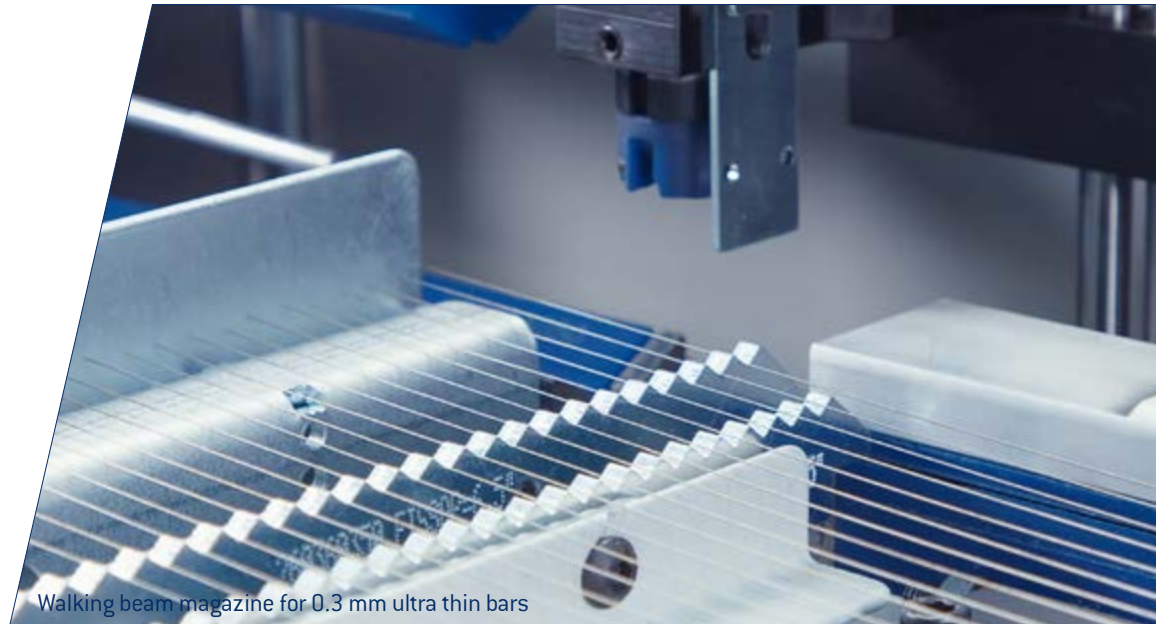
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CONSTANT INVESTMENTS IN RESEARCH

To be always Pioneers in automation

- IEMCA has always been working to develop innovative solutions for the end users and to improve its products in terms of productivity, design, physical and cognitive ergonomics.
- It employs globally 50 engineers dedicated to the product development: mechanical and electronic designers, software developers and dedicated staff for experimental tests in R&D laboratories.
- It has over 30 active patents for its bar feeders.
- It cooperates with the best Italian Universities and Research Centres in the territory.
- It is the technical partner and reference point for all those OEMs who want to provide the best technological solutions to their customers.



Walking beam magazine for 0.3 mm ultra thin bars



Completely closed guide channel



Magnetic collet for ultra fast turning



INNOVATIVE SOLUTIONS



50 DESIGNERS



35 ACTIVE PATENTS



RESEARCH CENTERS



TECHNICAL PARTNER

THE LARGE IEMCA FACTORY

Competences for the Industry of the Future

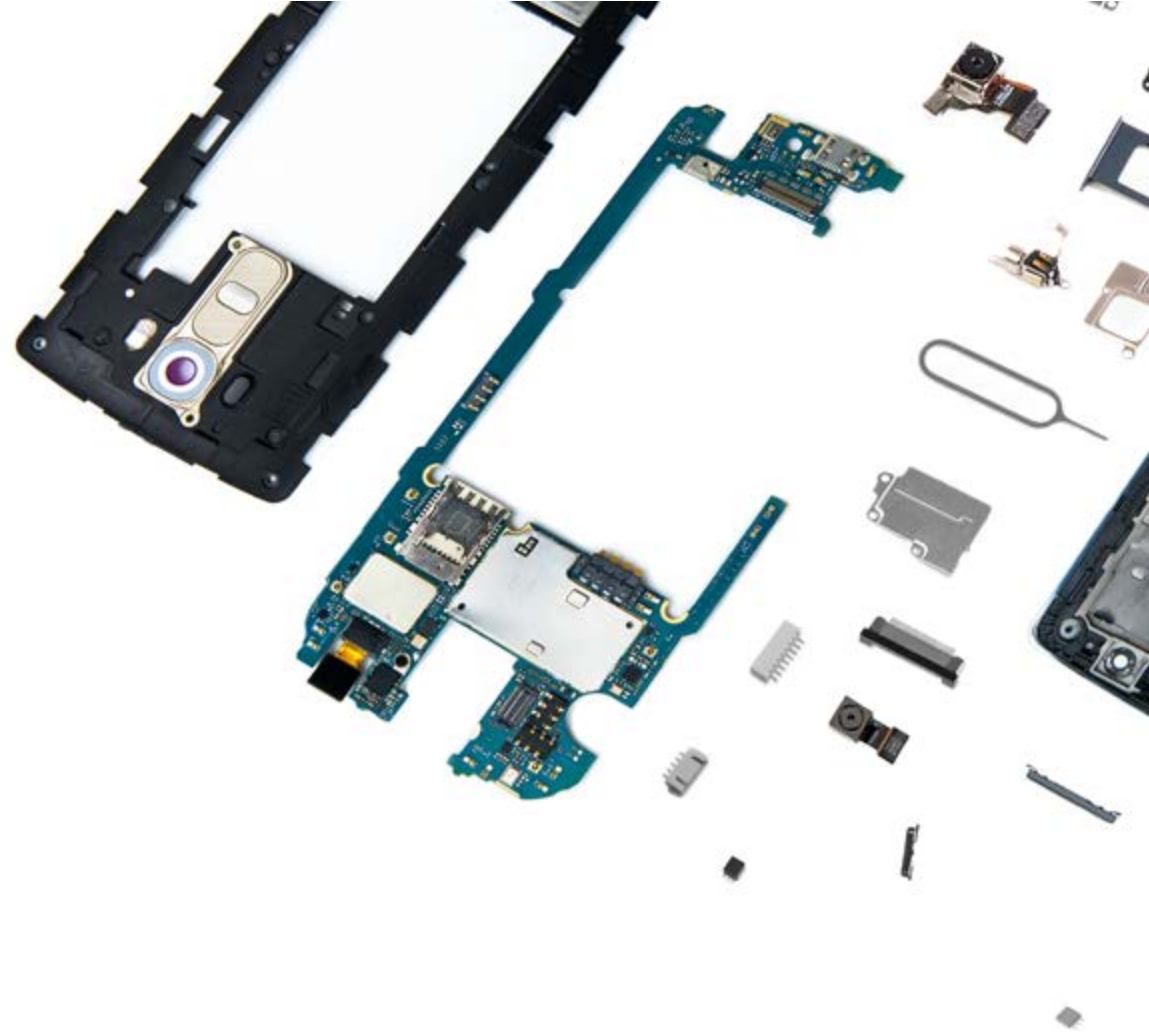
ELITE ZERO is made in the IEMCA plant in Faenza, Emilia Romagna, Italy. It is the biggest bar feeder plant in the world with an available surface area of more than 25,000 sq.m. More than 200 people work in this location everyday to develop new innovative technologies to support end users.



50+ YEARS OF EXPERIENCE WITH SMALL DIAMETER BARS

First in the world to feed 0.3 mm bars

In 2018 IEMCA was the first company in the world to supply a solution for automatically feeding 0.3 mm diameter bars.



Ø 3 mm

A

AS

CS

CH

GENIUS

ELITE

ELITE ZERO

Ø 0,3 mm

1966

1967

1971

1995

1997

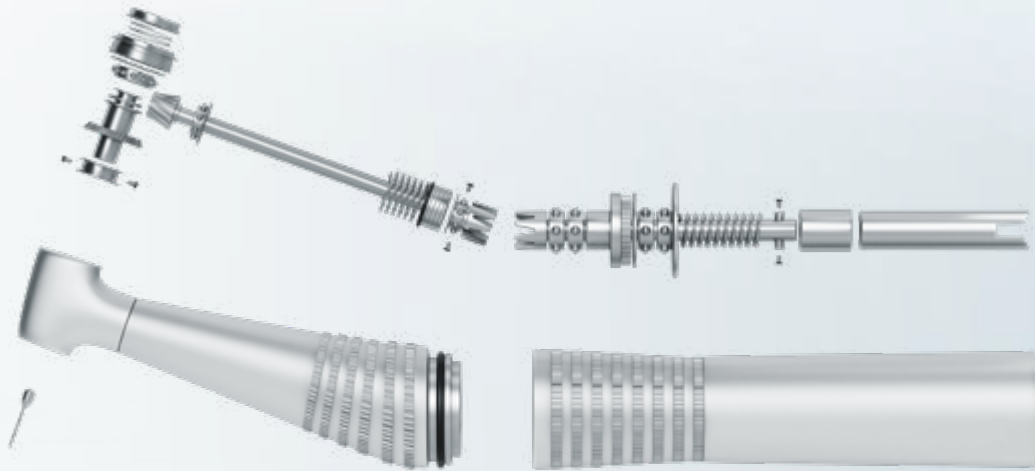
2007

2018

HIGH PRECISION

For micromechanics

ELITE ZERO has been developed to meet the needs of IEMCA partners for the management of ultra-thin bars in the watch, micromechanics and medical industries.





MICROMECHANICS AND HIGH PRECISION

Ultra Thin • Ultra Smooth • Ultra Fast

THE BEST FOR MICROMECHANICS

The first bar feeder in the world for 0.3 mm bars



ELITE ZERO allows to:

- Perfectly process ultra thin bars ($\varnothing$ 0.3 mm)
- Smoothly perform all work phases without bending the ultra thin bar
- Reach the maximum speed allowed by the lathe

ULTRA THIN

The best way to process ultra thin bars

Thanks to its features, ELITE ZERO carries out with high precision, smoothness and accuracy all phases of the work cycle, from bar feeding to unloading of the remnant piece:

- The bar selection system is very accurate and allows to feed bars of diameter 0.3 mm with maximum reliability.
- The "Full Digital" technology allows very small diameter, light bars to be managed with extreme accuracy. Thanks to the low inertia motor, equipped with an encoder with over 4 million pulses per revolution, the high performance torque control and highest quality mechanics, even bars of just a few grams of weight are easily managed.



ULTRA SMOOTH

The best way to process ultra thin bars

- The magnetic collet* and the absence of a rotating assembly allow rotation without inertia.
- The new "Right Length" electronic control system guarantees that no incorrectly sized pieces (longer/shorter compared to specifications) are produced.
- The "No touch" measuring system allows to precisely detect the bar length.
- The mechanical synchronisation system between the headstock and the bar pusher perfectly synchronises the movements between the lathe and the bar feeder, thus eliminating any risk of bending the bar.



Mechanical synchronism between the bar feeder and the lathe



* For the processing of non-ferromagnetic materials, please contact IEMCA.

ULTRA FAST

The highest turning speed can be reached

The ELITE ZERO has been designed to maximise productivity.

- The lathe maximum turning speed is easily achieved thanks to the round section, completely closed polyurethane guide channel.
- The magnetic collet and the absence of a rotating assembly allow rotation without inertia.
- The bar is guided along its entire path, from the feeder up to the inside of the spindle, with perfect stability even at maximum rotational speed
- The mechanical synchronism allows maximum travel speed of the headstock on the Z axis.



Completely closed guide channel



7" OPERATOR INTERFACE

"One touch" function

The new operator interface has new features that make the machine extremely easy to use and intuitive. The "one touch" feature facilitates the operator: it is in fact possible to carry out multiple operations with just one touch. Work programs can be stored and easily recalled if needed*. The bar feeder keypad can be re-installed on the lathe control panel.



*Only available for touch screens.

IEMCA INDUSTRY 4.0

The future is now

In January 2017 IEMCA was the first bar feeder manufacturer to deliver Industry 4.0 machines. IEMCA devices are able to acquire and share data with the user's machines and production systems, contributing to the constant improvement of production processes.

The **IEMCA Industry 4.0** solution includes:



Email and SMS notification in the event of an alarm on the machine



Telecontrol and remote control



Global remote assistance on all equipment



Back-up and restore of machine parameters



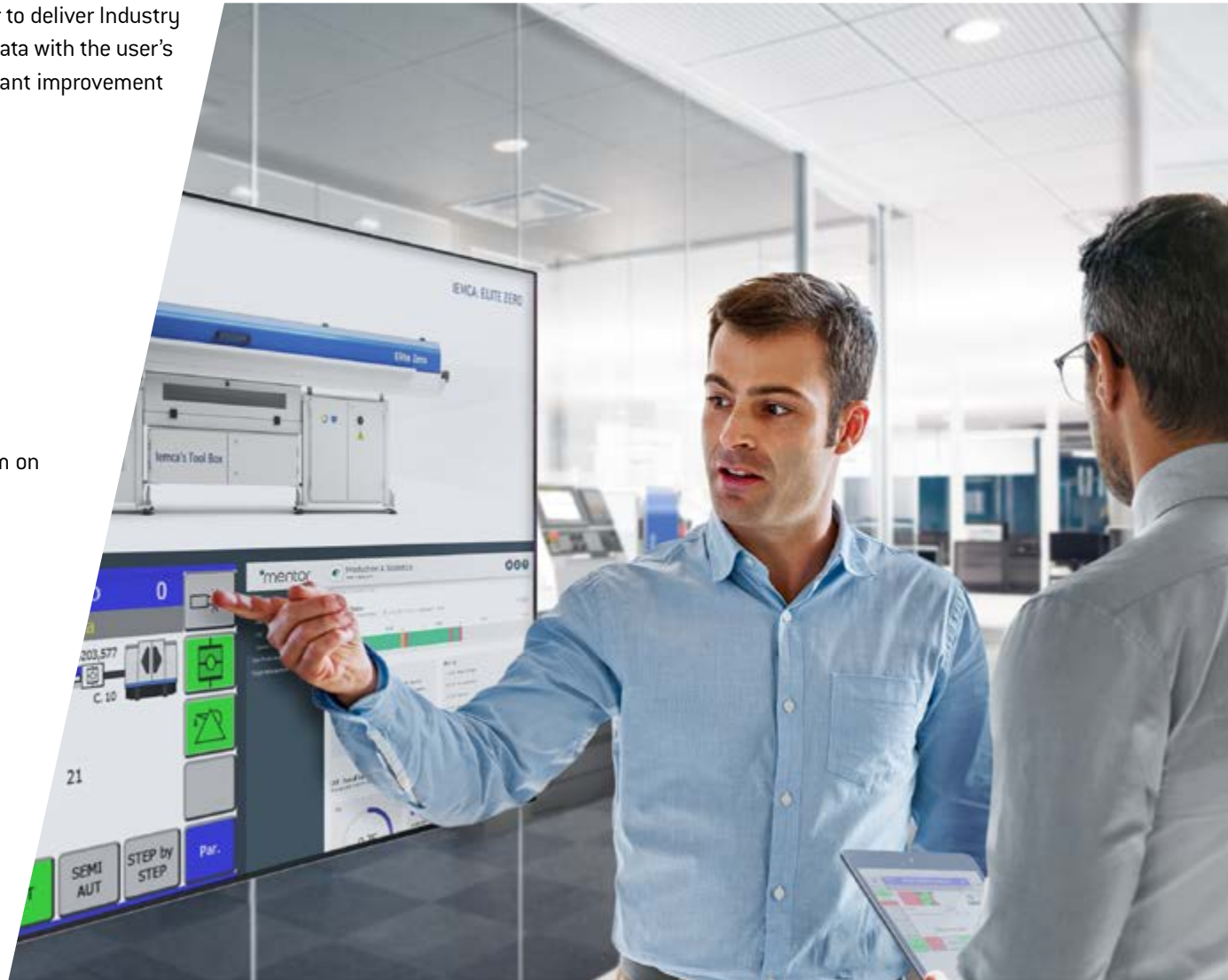
Telecontrol via OPC UA clients



Telecontrol with camera

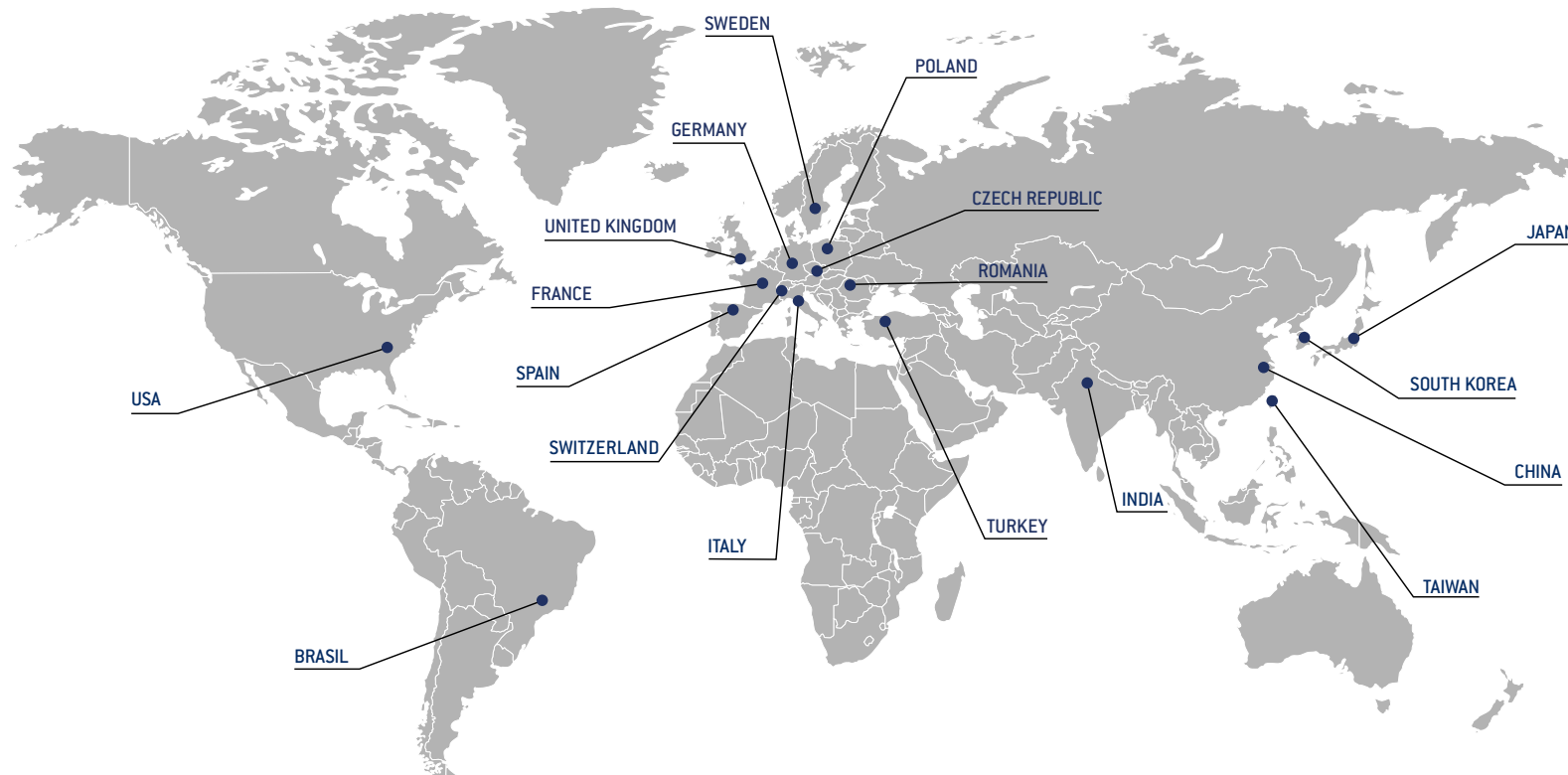


Remote control and wi-fi remote control



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TECHNICAL DATA



ROUND BARS
0,3 - 3 mm



BAR LENGTH
700 - 2000 mm



MAGAZINE WB
37 bars



REMNANT LENGTH
Min. 80 mm; Max: 280 mm



MAGAZINE REVERSIBILITY
Yes



COMPRESSED AIR
6 bar



BAR CHANGEOVER TIME*
<32 s



INSTALLED POWER
1,5 kW



NO. SPINDLES
1



POWER SUPPLY
220/400 Volt



*See technical data

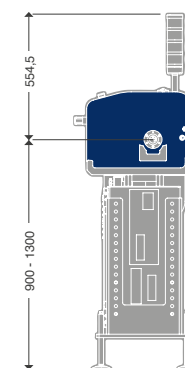
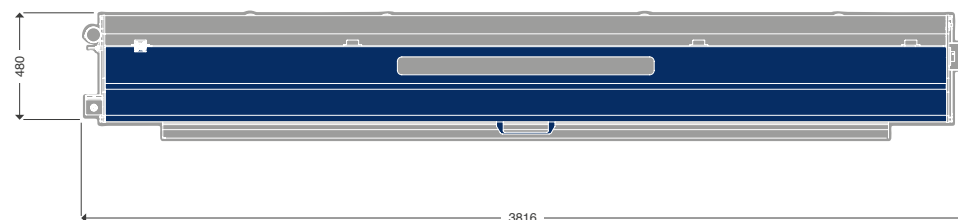
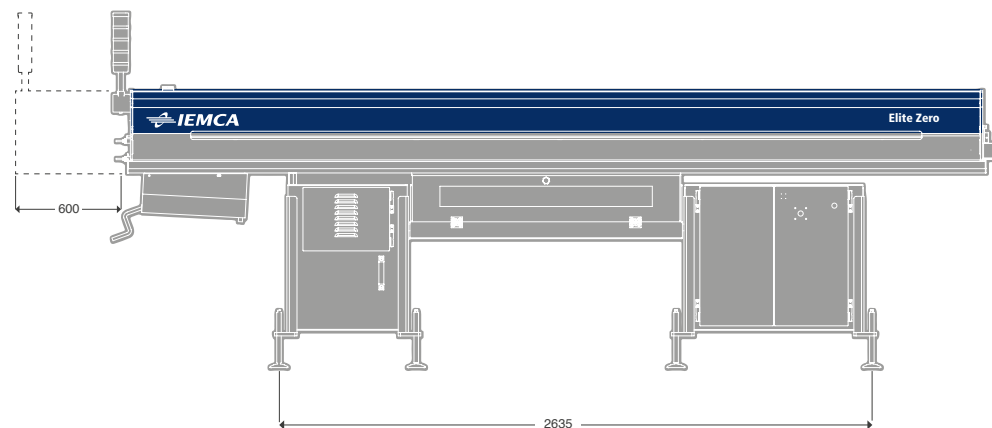
ELITE ZERO



Technical data

Walking Beam magazine (WB)

Round bar dimensions	0,3 mm	3 mm
Min bar length	700 mm	
Max bar length*	2000 mm	
Walking beam magazine capacity	37 bars	
Axial shifting	Optional	
Feeding speed (adjustable)	800 mm/s	
Return speed (adjustable)	1200 mm/s	
Max remnant length	280 mm	
Min remnant length	80 mm	
Bar changeover time**	< 32 s	
Power supply	220/400 Volt	
Network frequency	50/60 Hz	
Power supply	24 Volt DC	
Installed power	1,5 kW	
Air pressure	6 bar	
Bar feeder weight	Ver. 32 - 650 kg	



*Bar length for ultra thin bars, without pre-feeding. For different bar lengths, contact IEMCA.

** The table contains purely indicative data. Different factors such as length and material of the bar and some of the parameter settings by the operator, can affect the time significantly.

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People, Passion, Technology!

The **BUCCI INDUSTRIES GROUP** is worldwide leader in two sectors: in industrial **AUTOMATION & ROBOTICS** and advanced **COMPOSITE MATERIALS**. In the automation industry, Bucci Industries operates with the following brands:

IEMCA: worldwide leader in the design and production of bar feeders (www.iemca.com)

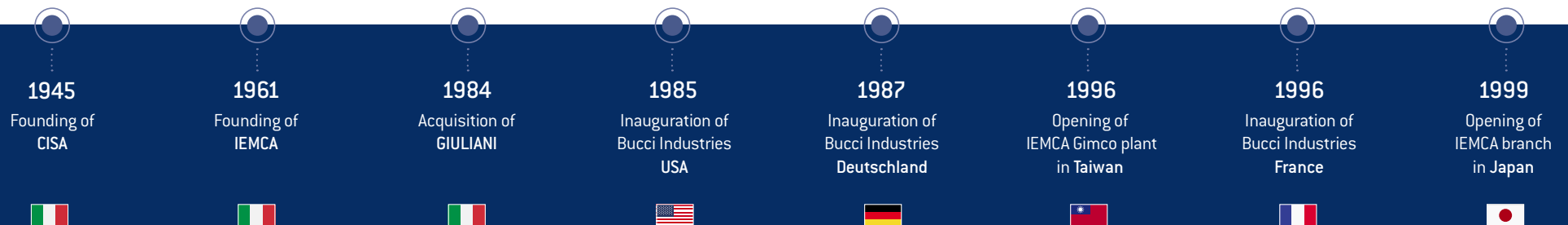
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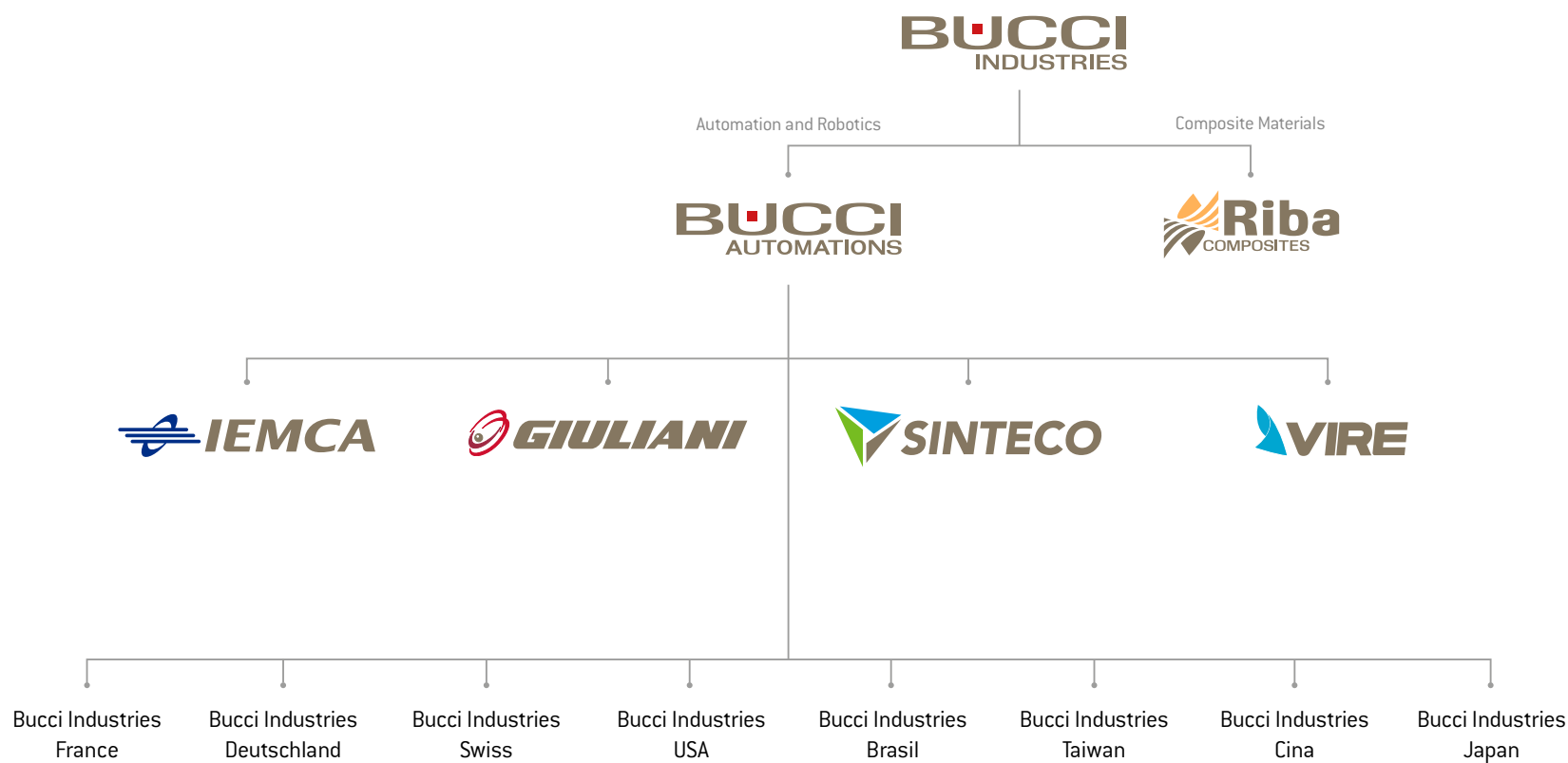
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VIRE: benchmark for the packaging of hygiene products (www.vire.it)

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www.bucci-industries.com





Italian
holding

Italian
companies

Italian
companies'
divisions

Worldwide
subsidiary
companies

1999
Selling of CISA
Founding of
BUCCI INDUSTRIES



2000
Acquisition of
RIBA Composites



2002
Inauguration of
Bucci Industries
Brasil



2003
Acquisition of
SINTECO



2005
Opening of
IEMCA Bi-Tech
plant in Cina



2007
Acquisition
VIRE



2015
Creation of
BUCCI AUTOMATIONS



2017
Founding of
Bucci Industries
Swiss



IEMCA WORLDWIDE



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