

WITHOUT COMPROMISE

No.20 - year 2017

International information magazine of the **FASSI** Group

THE INTERNET OF CRANES® comes on board

The new F600SE.44 is the first Fassi crane to be IOC ready. "Real time" help and maintenance is just a SIM-card away

∞ Interview

Managing Director Giovanni Fassi explains the consolidation of French operations Fassi France, Miltra and Marrel into parent company CTELM

∞ Previews

The new AWC and ACF systems for easier operation and for the automatic opening and closing of cranes

∞ Marine Series

The double rack on Fassi's marine cranes improves crane rotation

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With their double racks, the Fassi marine cranes offer even better performance in rotation

Fassi cranes are increasingly used in delicate arboriculture operations, in harmony with the skill of tree climbers



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A new EPOCH

"It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change." There is not much to add to these words by Charles Darwin that probably everyone knows and that, just as probably, most forget when it would instead be better to keep them in mind.

Yet the risk of simplification is always lurking just around the corner, because the best way to respond to change is not just to change oneself, but to evolve. The principle of evolution of the species is as valid in business as it is in nature, especially in a world that surprises us not only for its propensity to change, but also for the speed at which change occurs.

Against this backdrop, continuous innovation and new product development is essential. For example, in the issue of Without compromise that you hold in your hand, we present the new F600SE.44, equipped with the Internet of Cranes® device, the new Automatic Winch Control and Automatic Crane Folding systems, as well as with the new double rack structure that comes with Fassi marine cranes.

For Fassi, however, the process and concept of innovation goes beyond the product. It is ingrained into the heart and soul, and brand identity, of the corporate body, an organisation that is forever in a constant process of evolution.

Here lies the essence of Fassi, that has always had innovation at its core, as well as a forward-looking, evolutionary spirit. This has been demonstrated recently by moves to develop into more of a multi-product and multi-market organisation, becoming a true multinational.

But from the very beginning, there has always been a bigger plan, with broad horizons. Fassi is currently investing more than ever to build something more than just a commercial multinational. The aim is to become, to all intents and purposes, a productive multinational – not just selling products worldwide, but producing them around the world too.

The desire to speak all the languages of the world, to be present in all five continents, as well as to set up international manufacturing. This is reflected in recent acquisitions, as well as in the operations in Malaysia, with the over-arching goal of establishing a physical presence in different countries. Going wherever capabilities lead us, without ever forgetting where we came from.

But the challenges get harder and harder. A comparison is easy to offer, but reaching the target is somewhat more complicated: it is like bringing together the sounds of many and varied instruments into a single orchestral symphony. We are obviously already hard at work.

EDITORIAL

Fassi in **FRANCE**, les jeux sont faits





Fassi consolidates with CTELM, the parent company of Fassi France, Miltra and Marrel



INTERNATIONAL



With its consolidation into CTELM, Fassi takes a further step to develop its presence in France. It moves from being a commercial multinational, with international business focused solely on sales, to being a productive multinational with international manufacturing



The Marrel headquarters in France



Roger Boutonnet, President of CTELM, and Giovanni Fassi, Managing Director of Fassi

"The company is already focused on internationalisation in Europe and the United States. We need to become stronger in these markets, and achieve further growth"

Consolidation, growth, consistency and perspective. These are probably the key words that sum up the the consolidation of Fassi in France, into CTELM, the parent company of Fassi

France, Miltra and Marrel.

Through CTELM, Fassi and its longtime exclusive importer and distributor for France will manage the ownership of Marrel SAS, which is based in Andrézieux-Bouthéon, not far from Lyon, and well-known for its roll-off vehicle fittings, skip loaders and hydraulic cylinders.

Fassi first took a stake in Marrel in 2013, as we have previously reported Without Compromise. The new move underlines a clear strategy for Fassi in a key market.

This consolidation is significant as it

demonstrates Fassi's consistent, coherent strategy of developing across the field of equipping industrial vehicles.

Below, Giovanni Fassi, the managing director of the Albino-based group, explains the underlying reasons for this operation.

Fassi has consolidated into the parent company of Marrel. What does this investment mean for the Fassi Group?

We have passed from being shareholders to holding qualified majority ownership because we feel that it is important for us to expand in a technological sector which is of interest to us, and fits with our line of business. Above all, it is a strategic sector as it is linked to the fields of ecology and recycling.

Over the past few years, Fassi has moved on from a vision of commercial internationalisation to a more strategic vision, in other words, taking Fassi's entrepreneurialism and competence into new markets, developing multiple identities that operate in different niches. With the ownership of Marrel, Fassi has further diversified its business. In which direction?

In the direction of consistency, because we have not moved away from our target market, which is equipping industrial vehicles. We have, however, broadened our opportunities and perspectives, developing the range of solutions and technology in an evolving and fragmented market.

We are carrying out an important process which expresses the evolution of our identity from a commercial multinational to a true productive multinational, as also represented by our Malaysia operation.

What are the primary target countries for exporting the Marrel brand?

The company is already focused on internationalisation in Europe and the United States. We need to become stronger in these markets, and achieve further growth. I am thinking, for example, of Germany, South Africa, the Emirates, Morocco, as well as Poland, the Czech Republic, Israel, Mexico, and also Italy. There are a lot of markets with growth potential, on the back of Fassi's current presence.

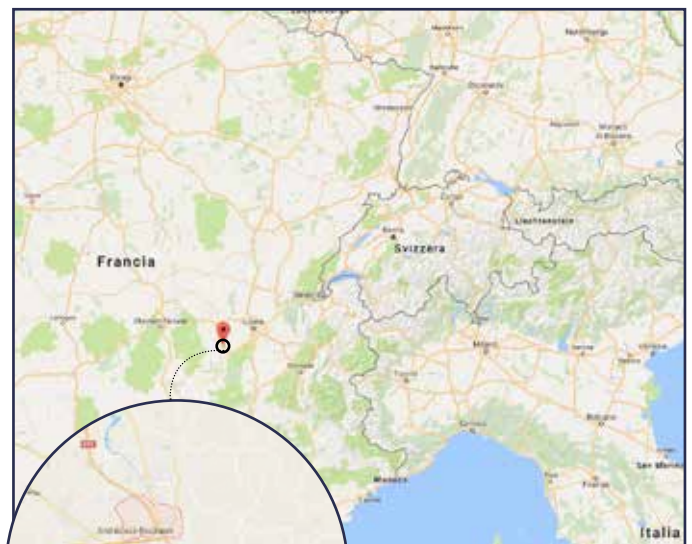
First Cranab, now Marrel. Fassi's technical and geographic diversification is always growing. Are there any other strategic projects in the foreseeable future?

Our focus is now on the growth of these companies and on increased coordination of the entire group. The purchase phase is a step which we could define as onerous but was actually "simple" to do. I believe that the real challenge lies ahead, in making the entire group work from the point of view of cohesion, coordination and synergy.

FASSI ACQUIRES A SUBSTANTIAL SHARE IN THE COMPANY CTELM

Fassi Group has acquired majority ownership of CTELM, the parent company of French companies Fassi France, Miltra and Marrel report.

Roger Boutonnet has been confirmed as president of CTELM, and he took the opportunity to point out the excellent results achieved in 2016 both in terms of sales for Marrel and with regards to strengthening all the subsidiaries. Roger Boutonnet, a partner in CTELM, stressed the objectives of growth and continuity that the company has set for the near future. The substantial role that Fassi Group will play in CTELM is a further step for its consolidation in the French market. It is evidence of how Fassi intends to consolidate its market position internationally in logistics, construction, recycling and forestry.



CTELM



F600SE.44 and The Internet of Cranes[®], together on the market

The new, improved-performance wallboard crane has been introduced. The combination with loC technology makes it even more state-of-the-art



INTERNET OF CRANES

Fassi's patented Internet of Cranes® - IoC system manages all the information relating to the functioning of the crane to give the operator (and the support centre) a machine with intelligent control for remote management of its efficiency

The crane market continues to demand high-performance models, and this is why Fassi has widened its SE range with a new model offering leading-edge performance. A reliable, precise, agile and efficient crane, equipped with an excellent vertical outreach, capable of reaching beyond the 10th floor of a building.

The F600SE.44 crane has been developed to meet the needs of the North American market in particular. It is designed for those who need to carry out challenging lifts in dry wall construction (also called wallboard or plasterboard). It is perfect for intensive use over time, capable of withstanding the most severe working conditions.

As with a number of other models in the SE series, the F600SE.44 is fitted with telescopic extensions on the main arm in addition to those normally seen on the secondary arm, allowing exceptional working heights to be reached. The outrigger rams of the telescopic extensions are positioned inside each arm to minimise overall dimensions and keep the machine compact. Sophisticated design solutions have also been adopted, including the "carbon look" protective housing, which not only adds a particularly striking aesthetic, it also protects the hoses on the secondary arm and the hydraulic distributor on the crane column.

With the F600SE.44 model, Fassi presents the market with its own Internet of Cranes® - loC technology, setting a new standard in the field of digital electronics in which the Italian company has gained extensive experience in research, design and production.

Fassi's patented loC system gathers and manages all the information relating to the functioning of the crane to give the operator (and the support centre) the benefits of a machine with intelligent control for remote management of its efficiency. This is a continuous rotation crane with a full range of features: the innovative FX901 control system, a 7" touchscreen colour display that allows the viewing of detailed information on the crane's stabilisation and operational conditions; the new digital V7 radio control unit; the ADC Automatic Dynamic Control which monitors all of the crane's functions, maximising the speed of motion according to load; and the FX900 control system, the digital "brain" that, as well as coordinating the crane's safety systems, gives the best set-up to maximise performance and control.

New F600SE.44

Version:

- .44 Version: an outreach of up to 30.48 m
- Lifting capacity: 40 tonne/m - weight 7799.52 kg

Electronic/hydraulic equipment:

- FX900 control unit
- D900 digital hydraulic distributor
- Internet of Cranes - loC
- V7 RRC Radio Remote Control
- FX901 colour Video Touch Display
- ADC Automatic Dynamic Control
- Flow sharing
- Integral Machine Control IMC



F600SE.44

OTC

Oil Temperature
Control

control

IMC

Integral Machine
Control

control

ADC

Automatic
Dynamic Control

control

D900

Digital Multifunction
Distributor Bank

control

V7RRC

Radio Remote
Control

control

FX900

Fassi Electronic
Control

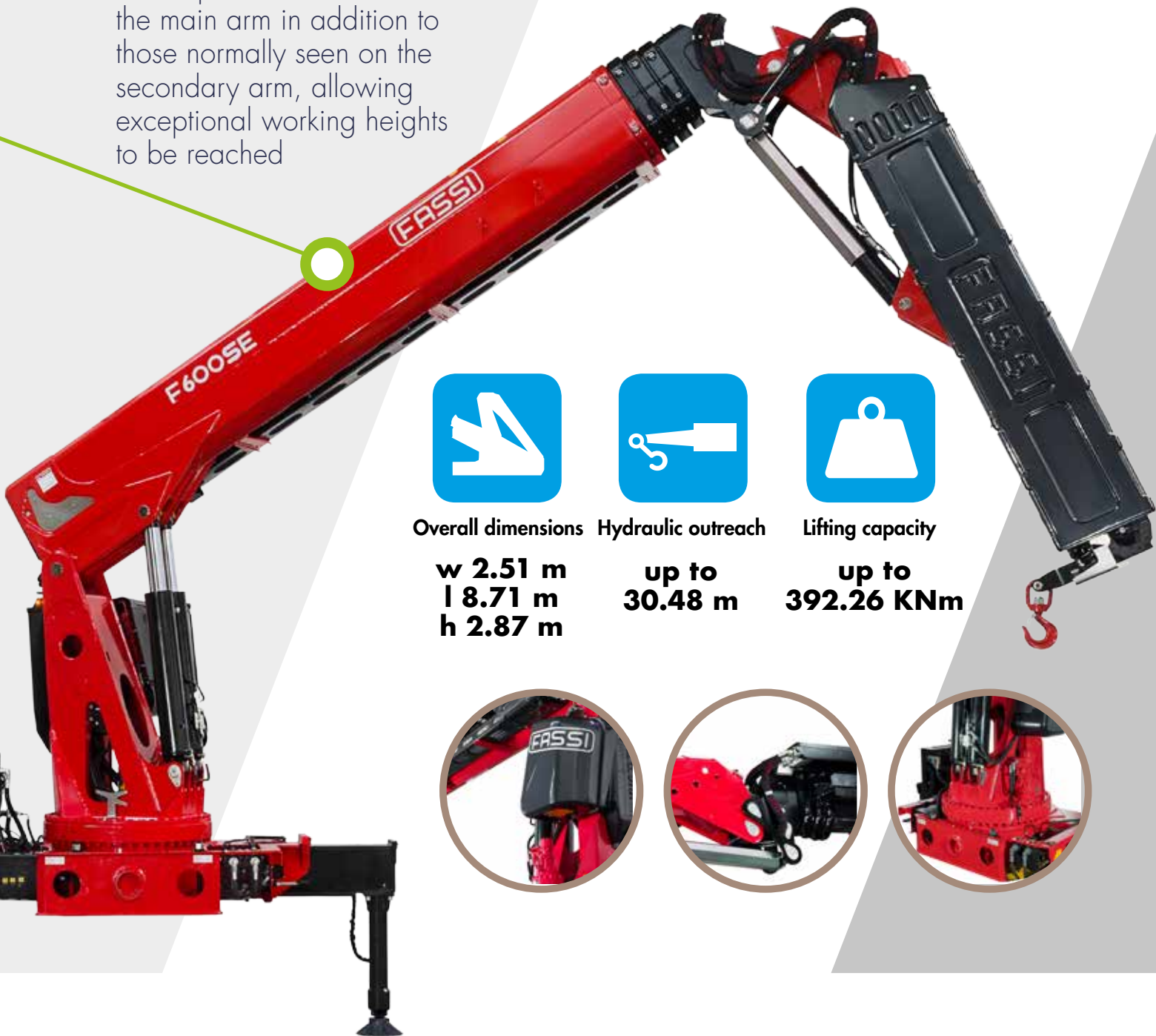
control

FX901

Fassi Electronic
Control

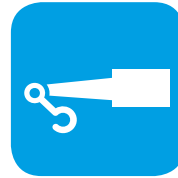
control

The F600SE.44 has telescopic extensions on the main arm in addition to those normally seen on the secondary arm, allowing exceptional working heights to be reached



Overall dimensions

w 2.51 m
l 8.71 m
h 2.87 m



Hydraulic outreach

up to
30.48 m



Lifting capacity

up to
392.26 KNm



OPTION

FS

Flow Sharing

performance

XF

Extra Fast

performance

MPES

Multi Power
Extension System

performance

UHSS

Ultra High
Strength Steel

strength

FSC

Fassi Stability
Control

control

With **the Internet of Cranes®** cranes are under control and online

With Fassi's patented Internet of Cranes® - IoC, all cranes fitted with the system are online. This allows operators to rely on a continuously active assistance service which thus optimises maintenance times and costs. This service is paid for separately and activated via a subscription that includes a SIM card. Its use is covered by data protection regulations that safeguard and govern privacy rights, of the obligation to not transfer the service to third parties and of the safety terms for the service itself.



Various extension packages are available:



**INSTANT
GEOLOCATION
OF THE CRANE
AND ITS STATUS**
(ACTIVE/IDLE)



**REAL-TIME
DIAGNOSIS**



**ANALYSIS
OF THE
RELIABILITY
OF THE
MACHINE**



**WORKING
CONDITIONS
OF THE MACHINE**

- 
- 
- 
- ✓ IoC with SIM included, valid for 1 year (obligatory)
 - ✓ Extension of SIM validity up to **2 years**
 - ✓ Extension of SIM validity up to **4 years**
 - ✓ Extension of SIM validity up to **7 years**
 - ✓ Extension of SIM validity up to **10 years**



SOFTWARE
UPDATES



MONITORING
OF RESIDUAL LIFE



PREDICTIVE
MAINTENANCE



The system uses a web portal where the user can view data collected by the system and sent via the SIM to the dedicated cloud server. This portal is the control interface for all the information made available by the loC system. It is accessible from any PC, tablet or smartphone with internet capability and web browser.

The information that the system makes remotely available via a specific software application and cloud architecture supplies the following types of indication:

- 1** Telemetry and diagnostics. Immediate reading from all of the sensors/actuators, including the output of the moment limiter.
- 2** Geo positioning system (GPS). Instant reading of geographic position data of the vehicle/crane with visualisation of the status (active/inactive) of the crane. Data from these readings makes it possible to track the route taken by the truck with crane over the course of the day.
- 3** The crane's usage status. Indications of any breakdowns.
- 4** Life and analysis of the machine: black box recorder. History of events linked to the functioning of the crane.
- 5** Statistics regarding the usage conditions of the crane. Results obtained by processing information relating to lifting operations carried out by the main arm, the secondary arm and (where fitted) the hydraulic extension.
- 6** Monitoring of residual life and predictive maintenance. Estimate of residual life calculated from the use of the crane with evaluation of the number and intensity of work cycles carried out.
- 7** Parameters and software updates. Control and setting parameters for the electronic moment limiter, together with automatic installation of software updates (subject to consent of the end user).



Some of these functions are available to the crane operator and others are available to the support centre. The GPS is active when the truck is running (either with the crane active or inactive), and can therefore serve as a tool to run daily checks on the movements and activities of each vehicle in the fleet.


With the Internet of Cranes® - IoC project, Fassi offers a completely new approach and an experience which is, in certain

respects, revolutionary with regards to the dialogue between operator and crane, exploiting opportunities offered by the web. The operator is constantly assisted in their work thanks to this new technological facility provided by a permanent connection to the web via multi-network SIM cards.

Fassi's patented Internet of Cranes® - IoC system manages all the information relating to the functioning of the crane to give the operator (and the support centre) the benefits of a machine with active intelligent logic during operations. These benefits include:

ADVANTAGES

- ✓ **Immediate remote resolution of machine breakdowns**
- ✓ **Locating the crane in the event of theft**
- ✓ **Optimisation of vehicle movements**
- ✓ **Improved understanding of the efficiency of the crane**
- ✓ **Maintenance planning**
- ✓ **Access to usage statistics**
- ✓ **Performance and effectiveness of the crane over time**
- ✓ **Automatic software updates**



Motivation, passion and high-quality products. These are the three ingredients that have allowed Fassi Belgium to establish the Fassi brand throughout Belgium over the last 10 years.

It is a company that began small, from a three-person team, and has grown over the years, ever-aware of the high potential of the cranes that form the foundation of the business. The cranes have also set benchmark standards for operators in Belgium, especially in the construction industry.

In this interview, Eric Dodemont, managing director of Fassi Belgium, speaks about the company's aims and objectives, and how it plans to realise ambitions to become bigger and stronger.

Fassi Belgium flying towards **LEADERSHIP**

The Belgian company founded 10 years ago has managed to establish itself in the market thanks to healthy doses of passion, training and quality

A focus on **TRAINING**

Training is one of the core priorities of Fassi Belgium – training that greatly promotes technical knowledge across the sales network and beyond



Fassi.Be SA began importing Fassi cranes into Belgium and Luxembourg about 10 years ago. Its efforts have been mainly focused on the development of a strong network that is as close as possible to the end-user customer

There are many Fassi cranes available from the Belgian dealer

Over the last 10 years, Fassi Belgium has managed to make Fassi one of the top brands in Belgium in the truck loader crane sector. What is the secret of this success?

First of all we have managed to create a new sales and service network. We have created an almost family-style atmosphere within our network, which promotes reciprocal and solid collaboration. This is a very important aspect for us in the long run. We also participate in a lot of events (trade fairs, open days, demonstrations ...) with the aim of developing contacts with a growing number of customers.

All of this is combined with a healthy amount of training for all the members of our network in order for them to deal directly with customers, without us needing to act as a go-between.

We support our network with their sales pitches, with the aim of guaranteeing the highest levels of presence for the customer and closing the sale. We have discovered that going to the customer together with the dealer, and providing them support throughout the various stages of the sale, has led to three times the rate of success. Motivation, passion for Fassi products and their quality are the main ingredients that make our recipe effective.

Your goal is for Fassi Belgium to be a leader in Belgium, while preserving its long-term vision. How do you plan to reach this objective?

The first step will be to have new offices that are suitable for our brand identity. We will also develop a training centre, which will greatly assist in the passing on of technical knowledge within our network. I would also like to be able to introduce a series of innovations in the field of after-sales service. For example, to create a customer-based maintenance service, in order to relieve the customer of the worry of who will go and collect their driver after they have delivered the truck for repairs, or who will come

back to pick it up. I would also like to offer, as is already the case in France, training for drivers, in order for them to have a "crane operator license", something which still does not exist here at the moment. This year we are putting much emphasis on communication and marketing: we will publish three important articles in the most widely-distributed magazine in Belgium; we will also produce a commercial on the F2150RAL to be broadcast on TV; and we will take part in many events (such as Matexpo, the Libramont agricultural fair, quarrying demonstrations).

We will also be training a young technician who will work alongside my colleague Hans De Haese in providing support for our network. All of this will be done with a view to maintaining motivation and passion for our products.

Which Fassi cranes are the most popular for the Belgian market?



Eric Dodemont,
Fassi Belgium CEO

As far as our customers are concerned, we have always focused on two targets. On the one hand, we have builders' merchants who account for about 40% of our market, and these ask mainly for the F365-RA and F820-RA cranes. On the other hand, we have roofing contractors. This is a growing market, with more and more companies wanting their own crane-truck combination. We also have the fortune

of having earned the complete confidence of various special transportation companies who have been growing alongside us.

But we are also delighted to be known for heavy-duty cranes as well. Despite Belgium being only a small country, we have already sold an F2150RAL, an F1650RA, three F1500RAs, two F1350RAs and many F1100s and F820-RAs.

What new products will you be presenting at Matexpo in September?

Above all, we are proud to present our first F2150RAL. The Fassi semi-trailer will also be present, as well as four other combinations and a truck fitted with a Marrel hookloader.



Headquarters:
RUE SAINRY 26
Trooz 4870
Belgium



MB TRANSPORTS & MANUTENTION

One of the customers of Fassi Belgium is the company MB Transports & Manutention, based in the Les Plennes industrial area in Thimister-Clermont. As of today, MB Transports has 10 vehicles fitted with Fassi cranes. The latest to be delivered is a Volvo FH 560, fitted with the new F1650RA xhe-dynamic.

"This crane has been designed to meet the needs of those who have to make challenging lifts, while the Prolink system also offers excellent performance for difficult jobs in tight spaces or in critical situations," points out Eric Dodemont, Managing Director of



Fassi.Be. "This is a continuous rotation crane with a full range of features, including the innovative FX901 control system, a 7" touchscreen colour display showing detailed information on the crane's stabilisation and operating conditions, the RCH/RCS digital radio control unit, the ADC Automatic Dynamic Control monitoring all of the crane's functions and optimising speed according to the load, and the IMC Integrated Machine Control system, the digital 'brain' that simultaneously coordinates and manages the crane's safety systems, its control and its performance."



50 years of **CUNZOLO** in the heart of Brazil

The Brazilian company celebrates its 50th anniversary
and 12 years of collaboration with Fassi

CUNZOLO AND FASSI

**Cunzolo bought its first Fassi crane
in 2007 and today, thanks to a
newly-arrived F1950.2.28, the
Brazilian company is increasing its
market leadership**





Marcos Cunzolo (left) and Renata Cunzolo Nunes

This year the Brazilian company Cunzolo Guindaste e Plataformas celebrates its 50th anniversary. Since 1967, the company has become one of the largest industrial machinery rental companies in Brazil, supplying quality solutions for lifting, for working at height, and for handling loads.

The story of Cunzolo has been strengthened over the last 10 years thanks to its collaboration with Fassi. A collaboration characterised by innovation and by a vision which is always

oriented towards new horizons.

The company has branches in the Brazilian cities of Campinas, São José dos Campos, Sorocaba, Taubaté and Brasília, and has more than 100 different pieces of lifting equipment in its inventory, including cranes of up to 275 tonnes lifting capacity. The collaboration between Cunzolo and Fassi began 12 years ago with the Brazilian company's purchase of its first Fassi crane, a Micro M30A model. It was 2005. The innovation and quality of all of Fassi's products led Cunzolo to stay faithful to that partnership, allowing it to grow and become stronger over the years. Today, Cunzolo has nine Fassi cranes from the Micro, medium- and heavy-duty ranges, which it uses for rental services.

The most recent of the Fassi cranes to be purchased is the F1950.2.28 crane with an L816 jib fitted on a Scania G 440 8x4 truck, which Cunzolo received in July of 2016. This is clearly a safe purchase for the company as the crane can be used in so many sectors: at airports, chemical plants, steelworks, in pulp and paper, automotive and metallurgical industries – as well as being able to guarantee at least 1,000 working hours per year.

The founder of Cunzolo, Rodolfo Cunzolo, is still head of the company as CEO. Alongside him are Renata Cunzolo Nunes as financial director and Marcos Cunzolo as sales director. Prospects for the future look good and, despite a slowdown in the Brazilian economy, Marcos Cunzolo pre-

SERVICES OFFERED:



Rental of cranes with capacities from 8 to 275 tonnes



Rental of aerial work platforms with a range of up to 43 m in height



Training and certification of aerial work platform operators



Fork-lift trucks with a capacity of up to 20 tonnes



Heavy-duty transportation



Industrial machinery moving



Lift planning and consultancy services



Professional training and qualification



CUNZOLO

tocando o céu, trabalhando na terra
desde 1967

dicts that turnover will grow by approximately 2-3% for the next few years. This is due to strengthening of the fleet thanks to the purchase of the F1950RA.2.28 crane on a Scania truck. However, once the market stabilises, Cunzolo forecasts a further increase "of between 5% and 7%".

"Cunzolo is well-known for its innovative spirit," says Marcos Cunzolo. "We look to anticipate market needs and I am convinced that, over time, the arrival of the new 40 tonne/m crane will bring in business."



CUNZOLO



Cunzolo was founded in 1967 by Rodolfo Cunzolo and Tomas Cunzolo. Since then it has maintained its position as one of the largest companies in the industry and the number of employees has grown to 115. Since 1967, Cunzolo has provided cranes and aerial work platforms, maintaining a fleet of modern equipment, looked after by trained professionals dedicated to pursuing excellence and satisfying the lifting and handling requirements of its customers.

A crane from the heavy-duty range, in **MINIATURE**

The new 1:50 scale model of the F1100RA he-dynamic is on sale for dealers now



● MODELS

Following on from the F1300RA.2.28 he-dynamic in 2013, WSI, in collaboration with Fassi, has produced new models which perfectly and precisely reproduce the functions of the real cranes



Mercedes Actros



The models are in 1:50 scale, but such a valuable collectors' item is sure to be highly desirable for our customers

attention to
details

Take a crane which, in real life, is capable of lifting up to 90 tonne/m, with an outreach of up to 31.85 metres with jib. A Fassi heavy-duty crane, equipped with all the latest electronic, hydraulic and safety systems. A crane that is characterised by its power and ultimate efficiency. Now that same crane has been reduced to 1:50 scale to produce genuine collectable models that maintain the full technical details of the original crane, made with remarkable attention to detail and a wealth of functions. The new models come four years on from the reproductions of the F1300RA.2.28 he-dynamic, when Fassi entered the collectors' world for the first time. Once again, the models have been made by the Dutch specialist model-making company WSI, which has worked in co-operation with Fassi to create the new series. The functionality of the models is impressive.

All of the movements of the crane have been realistically reproduced: the rotation of the column and articulation of the main and secondary arms, the extension of the boom sections, the positioning of the cross-beams and of the stabilisers. Each model comes supplied as standard with a jib that can be attached or removed as desired. And it is also amazing how effectively the jib sections extend, despite the substantially reduced size.

realistic
movement



The models are in 1:50 scale, but such a valuable collectors' item is sure to be highly desirable for our customers. It would be a shame to miss out. The models will be sold by WSI directly to model enthusiasts, while the Fassi sales network will use them as exclusive promotional items for customers.



Iveco Stralis Hi-Way



Volvo FH4



Scania R Streamline



DAF CF

1:50
scale

Winching loads is easier than ever with **AUTOMATIC WINCH CONTROL**



The new patented system by Fassi automatically maintains a constant distance between the fixed pulley on the jib and the load on the hook while telescoping sections are extended and retracted

With **AWC**
operations are
even easier

Thanks to this
new accessory,
operators have
automatic practical
control over the
movement of the
load via winch
and pulley

Easier operation and time saved when telescoping the crane while handling loads with a winch. These are, in short, the main advantages of the new Automatic Winch Control (AWC) system patented by Fassi.

It is an innovation resulting from Fassi's drive for automation to simplify the use of the cranes. The AWC system in fact gives the operator greater control while winching a load, making operations even more efficient and quicker.

The AWC system uses a network of wireless sensors to monitor movements and variations of the crane's extensions, maintaining a constant distance between the pulley on the tip of the crane and the lifting hook. Whatever extension or retraction of the boom is made, the length of wire rope between crane tip and load is automatically kept fixed.

When movement of the load requires a change in crane outreach, whether extending away from or retracting back towards the crane, the system automatically activates the winch, adjusting the length of cable that is unspooled, thus maintaining a constant distance between the pulley on the crane tip and the load on the hook. For example, when the operator activates boom extension, the system responds by automatically unwinding the rope off the winch without the operator having to activate this procedure as well. The benefit is that the operator only has a

single function to manage, as the AWC system automatically governs winch reactions.

The load on a hook suspended from wire rope can be moved horizontally, maintaining a constant height via a single command; or it can be moved with the arms of the crane at a constant incline in relation to the ground or any other reference point. In the latter case, the AWC system also measures lengths, heights and depths as it can measure the length of unwound cable, and automatically adjusts to keep the load at a constant distance from the ground.

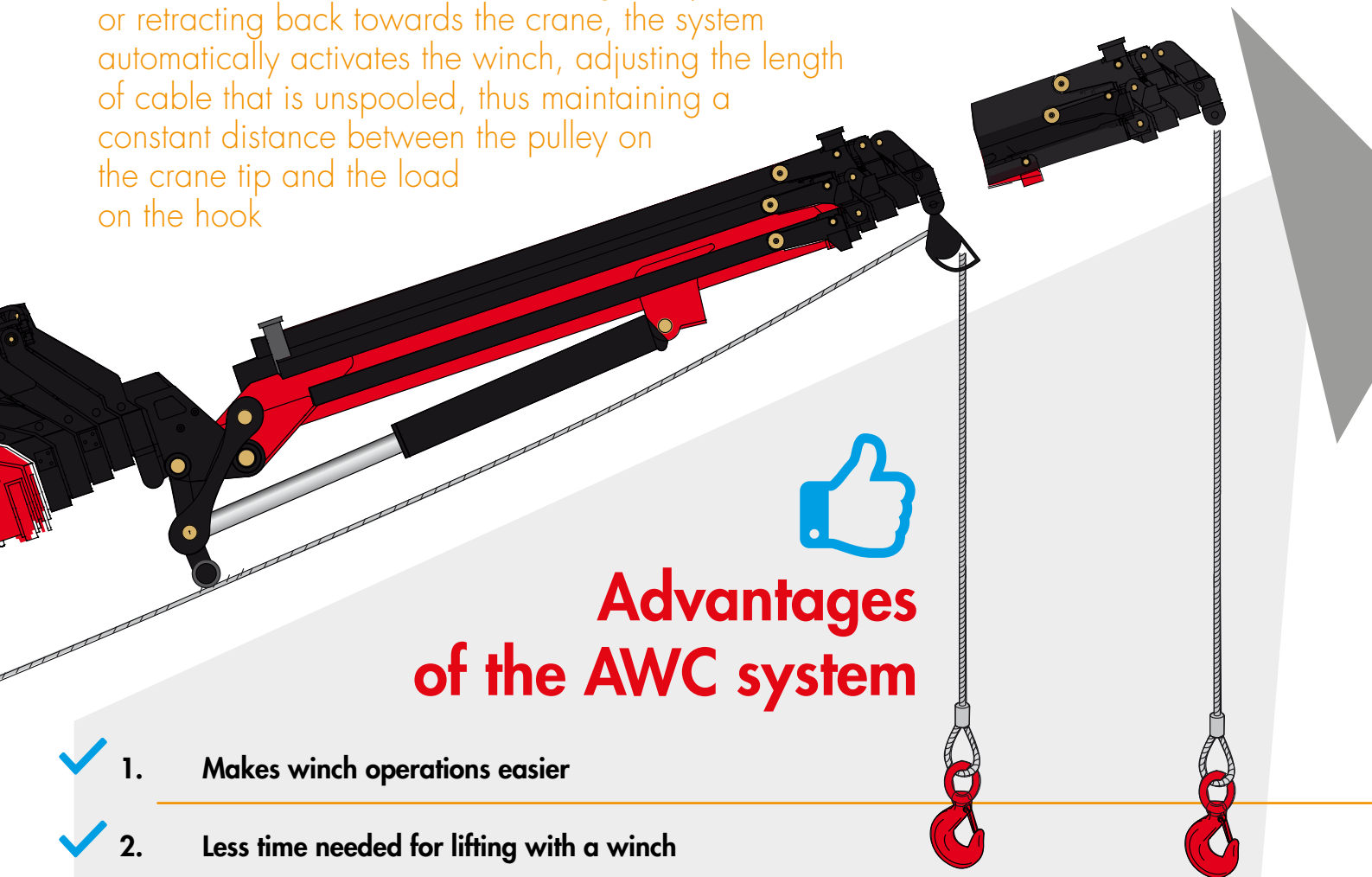
The sensors of the AWC system can be added to cranes at any time without any particular cabling, as they are wireless. Furthermore, the system can be used either with or without hydraulic extensions and can be fitted to cranes with the FX500 or FX900 control units and the D900 distributor.



The new AWC device is available for all cranes equipped with a D900 distributor and winch:

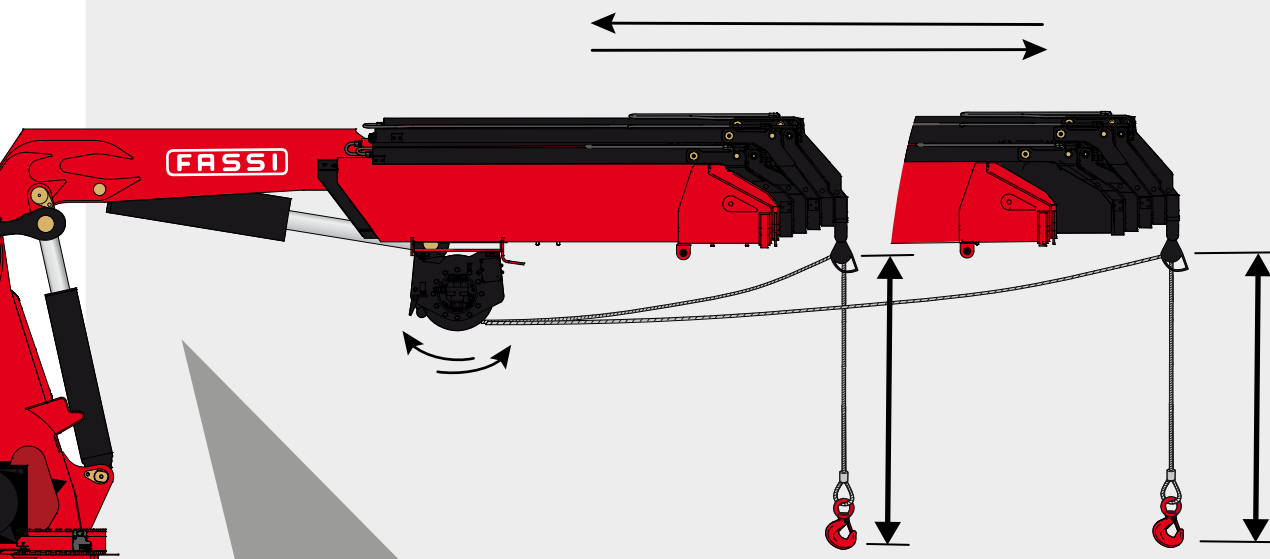
e-active
e-dynamic
he-dynamic
xe-dynamic
xhe-dynamic

When movement of the load requires a change in crane outreach, whether extending away from or retracting back towards the crane, the system automatically activates the winch, adjusting the length of cable that is unspooled, thus maintaining a constant distance between the pulley on the crane tip and the load on the hook

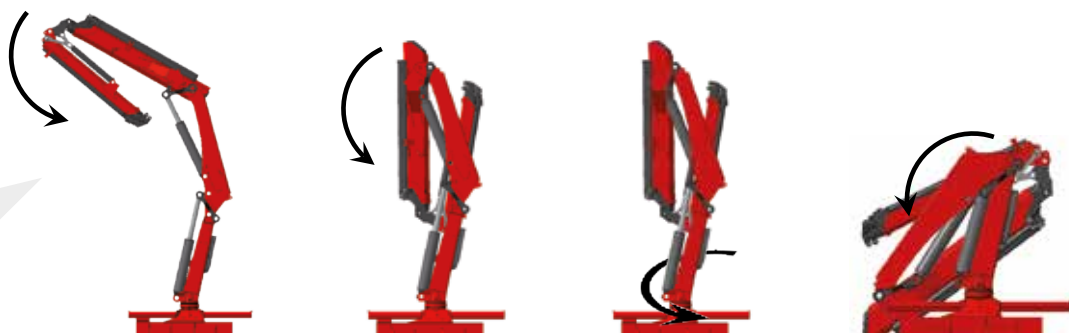


Advantages of the AWC system

- ✓ 1. Makes winch operations easier
- ✓ 2. Less time needed for lifting with a winch
- ✓ 3. Constant precision movement via pulley
- ✓ 4. The screen on the radio control unit shows distance moved by the hook
- ✓ 5. The system can be installed without any additional wiring



Instant opening and closing with AUTOMATIC CRANE FOLDING



With ACF, cranes are even easier to use

Thanks to this new feature, operators can unfold or store the crane by a single manual command, which automatically activates a sequence of movements for correct positioning at the beginning and at the end of operations.

Fassi is developing new systems of automation to make cranes safer and easier to use. These include the Automatic Crane Folding system, which can be used on models fitted with digital radio control and certain control sensors.

This new system allows for the automatic opening and closing of cranes, in

particular to activate the return to rest sequence. Automatic Crane Folding can only operate without any load on the hook, and cylinders retracted (both on the hydraulic extension and on the crane itself). In any case, before activating the automatic closing sequence, the system always pressurises the rams on the crane and on the hydraulic extension.

Enabling of the Automatic Crane Folding function is indicated by a specific icon on the radio control unit display and by an acoustic signal. The system is deactivated via the same press of a button that was used for the activation.

A new function developed by Fassi introduces automatic opening and closing of cranes – even for models with a hydraulic extension

EASIER

By a single manual command, you can configure the opening and closing of the crane

Automatic Crane Folding can be used with the following models:

- ✓ Slew ring cranes
- ✓ Rack slewing cranes with the angle of rotation of the column controlled by magnetostrictive sensor (RPC)
- ✓ Cranes with or without a hydraulic extension or winch

The system cannot be used with models in the AS, T, Z and C series or with cranes that have stowable pulleys.

Benefits of the ACF system



- ✓ Ease in setting up the machine for operation
- ✓ Easy crane opening and closing procedures
- ✓ One single command activates a system that intelligently controls an automatic sequence of movements
- ✓ Can be used with the majority of Fassi cranes





**With their double
RACK BASES,
Fassi's marine
cranes offer even
better performance**

Thanks to this new equipment, these Fassi cranes are capable of handling nominal loads in rotation with inclinations of up to 10 degrees and in rough sea conditions

MARINE SECTOR

Fassi has always embraced innovation in its broadest sense: product, process and industry. This is why the company has, over the years, generated new business in all sorts of fields, establishing itself in new markets beyond construction, such as the marine sector, where it has achieved notable sales



Over the years, Fassi has applied its creativity and capacity to adapt technology to new and unexplored markets. Markets such as forestry, marine, logistics, railways and defence. And particularly in the marine sector, Fassi has managed to grow thanks to its application of technology and innovation. The latest innovation is the development of a base with a double rack for a number of cranes from F40B.0 to F255A. This new system of rotation has been introduced to expand Fassi's offer for the marine sector, thus responding to demand for machines with this new system.

The two opposing racks make it possible to double slewing torque, without increasing slewing pressure. This results in an improvement of performance when the crane is out of vertical, as is often the case out on the water. Cranes

fitted with this system are in fact capable of exceeding the 5-degree inclination limit and of handling loads in rotation up to approximately 10°. Beyond 10°, the load that can be handled reduces progressively, reaching a reduction of approximately 50% at a 15° inclination.

The vertical dimensions of the base with double rack have been set out in such a way as to produce a crane with a similar height to that of the crane with a standard rotation system. However, the design of this modular configuration of the bases makes it possible for Fassi to offer the option, on request, of lowered or raised bases that allow for reduced or increased overall height of the crane.

FASSI'S **MARINE** SERIES



Fassi cranes designed, developed and created exclusively for the marine sector are valued for their flexibility, their durability, and – of course – for their performance. These are cranes from the light-, medium-, and heavy-duty ranges, which are suitable for all kinds of handling operations

in ports and shipyards. Furthermore, thanks to the special design of the base and to the centralised commands, they can be fixed onto all kinds of boats, for cargo, fishing or pleasure craft. Their versatility is enhanced by the wide range of accessories and attachments offered by Fassi: from hydraulic

and manual extensions to hydraulic winches fitted on the secondary arm of the crane, from clamshell buckets to hydraulic grabs. An electro-hydraulic distributor bank with control unit, conforming to the specific regulations, is also available for the autonomous functioning of the crane.



ADVANTAGES

- Improved performance when the crane is lifting when out of vertical
- The possibility to reduce the height of the crane
- Other models are planned for 2018
-
- Cranes available with double rack base:
From F40B.0 to F255A



For all boat type



Full range accessories



Modular design



Cranes fitted with a double rack are capable of exceeding the 5° limit of inclination imposed by rough sea conditions



Characteristics of Marine Cranes



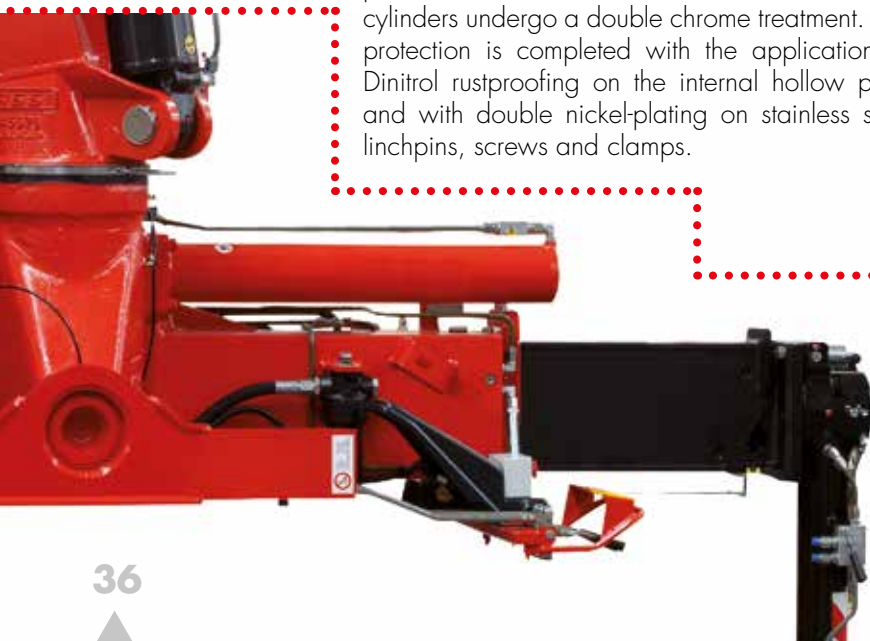
SPECIAL BASE

Cranes fitted with special bases for easy installation in a fixed position on all types of boat, centralised commands and distributor isolated from the structure and protected from saline corrosion.



REINFORCED PROTECTION

The pistons on the main and secondary rams are treated with a hardened chemical nickel-plating (50 microns) and chroming (100 microns); the pistons of the boom extension rams and the rotation cylinders undergo a double chrome treatment. The protection is completed with the application of Dinitrol rustproofing on the internal hollow parts and with double nickel-plating on stainless steel linchpins, screws and clamps.





PAINTWORK FOR THE MARINE ENVIRONMENT

The treatment for the marine series cranes consists of the following process: Grade A Sa 2 ½ sanding (ISO 8501-1); application of organic epoxy zinc primer (minimum thickness

70µm); two coats of an intermediate spray-applied layer of bi-component epoxy base (thickness 100µm), and a final double coat of bi-component polyacrylic varnish (thickness 70µm) with an overall average dry film thickness of 240 µm for the complete treatment. This ensures a very high resistance to corrosion of up to 1500 hours in tests in saline fog according to the ASTM B117 (UNI ISO 9227) standard.

F40B.0/F50A.0/F55A.0/F65B.0/F70B.0/F65B.1/F70B.1/F85B.0/F90B.0

IMC Integral Machine Control control	ADC Automatic Dynamic Control control	S800 Multifunction Distributor Bank control	S900 Multifunction Distributor Bank control	D850 Digital Multifunction Distributor Bank control	D900 Digital Multifunction Distributor Bank control	RCH/RCS Radio Remote Control control	FX900 Fassi Electronic Control control
FX500 Fassi Electronic Control control	FX901 Touch Screen Display control	ME Manual Extension control	FSC Fassi Stability Control control	MOL Manual Outriggers Lock control	CPM Crane Position Monitoring control	OTC Oil Temperature Control control	GAS Grabe Automatic Shake control
FS Flow Sharing performance	XF Extra Fast performance	MPES Multi Power Extension System performance	FL Full Lift performance	JDP Jib Dual Power performance	PROLINK Progressive Link performance	FSA Fassi Smart App performance	
UHSS Ultra High Strength Steel strength	CQ Cast Quality strength	RPS Rack and Pinion System strength					

F800RA and tree climbers working together at a height of 20 metres

Fassi cranes are increasingly used for delicate tree surgery, in harmony with the skill and professionalism of the tree climbers

THE F800RA.2.26

in action

An F800RA.2.26 he-dynamic, chosen for its precision and safety, has been used for arboriculture operations in Monza Park



Using Fassi knuckle boom cranes with proper training and competence reduces many of the hazards, making tree surgery faster and as a result less stressful for the workers involved

When safety is important, Fassi has the answer – whatever the industry and whatever the situation. Especially when the work to be done takes place several metres off the ground, such as pruning or felling tall trees.

Thanks to the high precision of movement of Fassi cranes, the sector of arboriculture and tree climbing - a technique of tree pruning and cutting of tall trees - is using these machines more and more, particularly for lifting and moving trees and weighty plants.

Operations are carried out by a combination of the tree climbers, with their agility and skill in working both up in the trees with a harness as well as on the ground, and the crane, which is used to support the weight of the branch being cut. There is careful attention to every movement of both man and machine.



The F800RA.2.26 he-dynamic recently had a lead role in an intensive training course for tree climbers at the Monza Park Agricultural College, which took place over the last few months in Monza Park. The course was held by American expert Mark Chisholm, one of the world's leading tree climbers. Tree climbing is becoming increasingly popular in Italy as well and has revolutionised arboriculture work. It is a technique that was imported from the United States in the 1980s and which requires specialist personnel with formal qualifications. Felling a tree must be carried out by tree surgeons kitted out with all the appropriate protective equipment: a helmet with visor and ear protectors, as well as full cut-resistant clothing.

The operation requires a high level of professional expertise and competence, as well as suitable machinery, such as the Fassi F800RA crane which was rented for this event. With agreement of the park management, several trees were chopped by two teams, and each participant was able to have a go at pruning at height using the Fassi F800RA crane. Communication and teamwork between tree surgeon and crane operator on the ground must be perfect in order to manage operations in complete control, ensuring safety in the working zone and no damage to anybody or anything.



An F800RA.2.26 hydraulic for arboriculture operations in Monza Park (MB)



Bryan Noyes, Mark Chisholm, Stefano Lorenzi

"When choosing the equipment to use for tree climbing, the most important aspects to consider are the benefits offered, above all safety, followed by the possibility to simplify work and, why not, add a touch of innovation to everything you do," says Mark Chisholm. "Science and technology are at the service of our profession, so it is better not to always rely on the same old tools but to move with the times and exploit the advance of technological progress."

Precision is an essential requirement not just for the tree climber who is cutting the tree, but also for the operator of the knuckle boom crane.

During his courses, Mark Chisholm teaches students how to position themselves in the tree and how to make the cuts, and also how to use the full potential of the Fassi cranes and how to communicate with the operator. Using Fassi knuckle boom cranes with proper training and competence reduces many of the hazards, making tree surgery faster and as a result less stressful for the workers involved.



TREE CLIMBING

Tree climbing is a climbing technique that gives access to the crown, and enables safe movement from one branch to another while harnessed to the trunk. The technique was created in the USA, and later spread throughout Europe. Tree climbing is mainly used for pruning, felling, strengthening or anchoring tall and medium-sized trees. The operator is tied

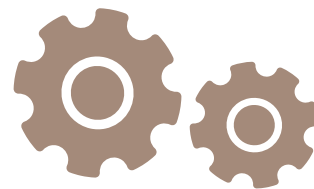
with a harness, to a double rope anchored to the tree itself as high up as possible. This technique enables working from within the crown, accessing areas that aerial work platforms and mobile cranes cannot reach, and thus making it possible to cut with chainsaws at the exact point needed.



Specifications for the

F800RA.2.26

he-dynamic + jib L516



- Lifting capacity: up to 72.17 tonne/m
- Maximum hydraulic outreach: up to 20.75 m with jib
- Overall dimensions: l 2.50 m, w 1.50 m, h 2.45 m
- Continuous rotation on a slew ring with double motoreducer
- Double hydraulic circuit



Electronic/hydraulic equipment:

- IMC integral control system
- FX900 control unit
- Double D900 digital hydraulic distributor
- RCH/RCS radio control unit
- ADC automatic dynamic control
- Flow sharing



Overall dimensions

l 2,50 m, w 1,50 m, h 2,45 m



Lifting capacity

72,17 tm



Maximum hydraulic outreach with jib

20,75 m

