# WITHOUT

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compromise

Fassi Gru international magazine with information and updates



# Fassi and Safety smile at work



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## In this edition

We open this issue of the magazine by talking about safety, a subject that relates

to crane technology and how it can be translated into control over potentially

risky situations. We will also be looking at this subject in the article dedicated to

innovation in radio control systems, focussing our attention on the features that

make the Fassi range the most complete and easiest to use. Applied research

is the other leading subject in this magazine, and will be met when analysing

a whole new generation of hydraulic jibs and when discussing the JDP system,

which is destined to increase jib power by 30%. This system forms part of Fassi's

"custom" policy, which stands out in that it is possible to select cranes with turn-

table or rack system, while ensuring the same rotation capacity. In the in-depth

product discussion we give a detailed presentation of one of the most high-per-

formance cranes in the Fassi range: the F950AXP, available in configurations with

up to eight hydraulic extensions. We end with a specific overview of the German

market, which allows us to get a better look at two Fassi series that are worthy

of attention: Baustoffe and Series K. Focus

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## Unique products to compete

The importance of continuing in the direction we have taken, heading towards uniqueness of product.



When we at Fassi decided to start designing and building cranes that are unique in their quality and performance, we were well aware of the hard work this would involve, the genuine business challenge of producing in series. However, we could probably never have imagined that the acceleration in social and economic events over the past three/four years, along with the dynamics and progress of the lifting market itself, would confirm the validity of this decision in such an obvious way. A choice that proved its validity as time progressed and was probably already part of Fassi's strategic plan. The fact that it all happened so quickly, and in the way it did, was rather a surprise to everybody.

For Fassi, being "unique" means first of all fitting cranes with those innovations destined to make life easier for operators, so that they can work in a safer, more profitable manner. For Fassi, uniqueness is synonymous with innovative technology. Giovanni Fassi himself pointed out that the concept of uniqueness is a determining factor and the significance it has not only for the company, but above all for Fassi crane users: "Our drive towards uniqueness of product is achieved by applying technology that is capable of improving the performance of machines, while at the same time keeping them easy to use and safe in all working conditions. Our technicians have perfected a large

number of devices that have changed the very identity of cranes. To these innovations must be added the decision to continue manufacturing exclusively on order, starting from the specific needs and expectations of each customer. It can be stated, with reason, that each Fassi crane is unique, built based on the needs of the people who will be using it. Manufacturing cranes with unique characteristics means that today, as never before, we have our own identity and can offer products that stand out on the market. Fassi's position at world level is built essential on this fact. There are two other points that I consider important to understand our idea of uniqueness. Manufacturing cranes is a family vocation that we intend to constantly confirm and consolidate. In a market where far to many financial agents and managers have been seen recently, we consider family ownership to be an important and lasting value. In fact, the current situation has once again highlighted the profound significance and positive features of family business. In past years, some people suggested that these business dynasties were destined to fade. This forecast has been proved wrong: not only are family businesses resisting economic and market evolutions, frequently based on financial and speculative goals, but they are setting themselves up as models to be imitated. The second point: our core business remains and will continue to remain exclusively the manufacture of cranes. While some businesses and brand







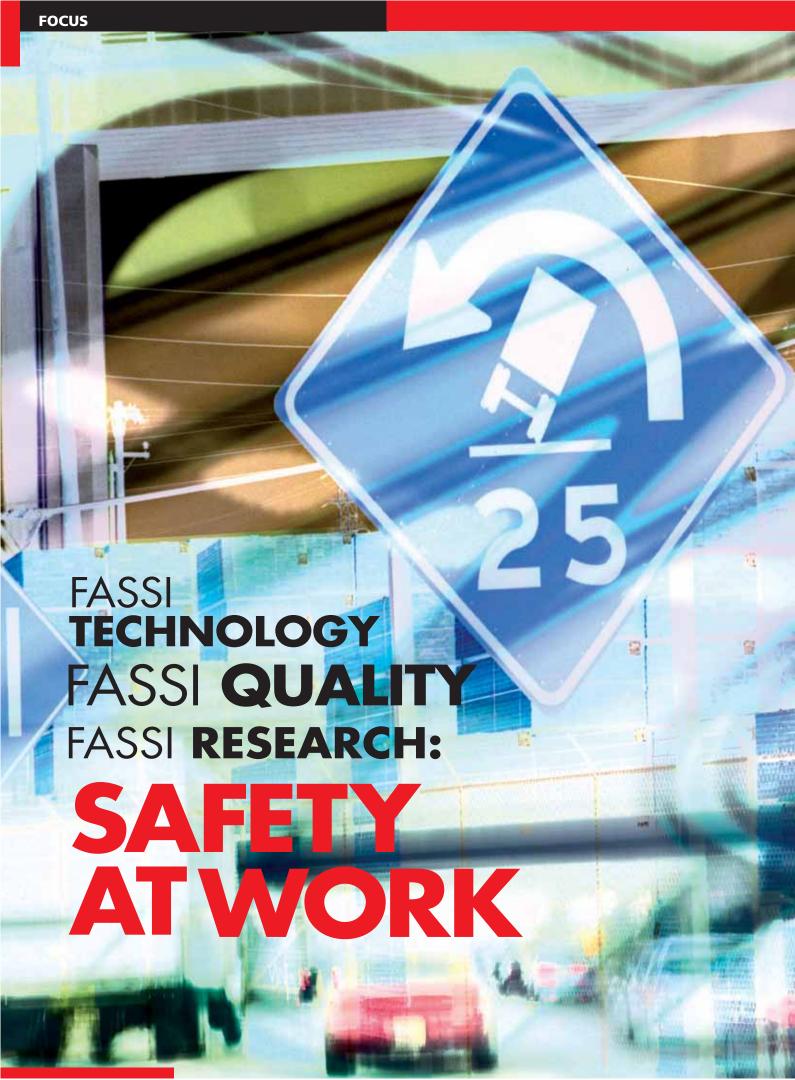




names in this sector have also turned towards other types of manufacture and other interests, here in Fassi we proudly defend an idea: that of wanting to carry on doing only what we do well. This is also the sense of our uniqueness. Cranes as the absolute centre of our interests and of our plans. I believe that it is for this reason also that here at Fassi we are able to achieve innovative goals. But this certainly doesn't satisfy us. This will to go ahead, above all by applying more and more new technological solutions on our cranes, makes us look hopefully at the force that drives us and distinguishes us from the international leaders in strategic sectors. Just like these industrial groups

and businesses, we are aware that there is a unique opportunity in front of us: transforming the world and the way it works. We live on a planet that requires farsighted, courageous choices. Our planet needs more intelligence and sensitivity. New forms of logic, that will change the systems, processes and infrastructures, allowing us to design, build, sell and purchase goods in a more satisfactory way. To provide services that will help people work better and feel better. In all this, state-of-the-art technology is our ally. Technology now forms a part of the object that surround us and it can be used to change the state of thing. We must not renounce the benefits offered by

progress, particularly if it also has an eye to the ecosystem in which we all live. The world needs trust, optimism and change. Not just because this is possible and can be achieved, but because it is necessary. In a more intelligent planet, even problems and difficulties can be solved more easily. We have the resources to do this. Here at Fassi we are doing our best to do so, with excellent results".



# THE SAFETY CHALLENGE

# Fassi cranes stand out for their ability to provide the most highly evolved standards of safety

Research, technology and quality: it is on these three factors, related and synergetic, that the superior safety of Fassi cranes is based. A value that relates both to the crane structure, to the electro-hydraulic and movement devices, and to the elements that make operation of a Fassi crane so simple when at work. The constructive choices that characterise a Fassi crane are an integral part of a vision that puts safety as one of the essential factors in quality. Selection of materials, manufacturing procedures, controls, tests: every phase is aimed at underlining this central feature. The innovative devices perfected exclusively by Fassi make the crane a receptive organism, with an attentive, ever-present artificial intelligence. A Fassi crane does not only perceive all the lifting dynamics, but also knows when to intervene to adjust its movements automatically according to the risky conditions. Safety dominates and characterises all aspects of the crane, it almost seems to form an integral part of the design, the form, the way in which the dialogue between man and machine is established and develops. This is something well known to operators, who find that their cranes have technology that is easy to dialogue with, preventing uncertainty and avoiding unexpected and unpleasant surprises. Merit of an overall project in which each element, including the radio controls, is capable of facing up to and winning the challenge of safety.



# Innovation in remote control peripherals

Fassi radio controls are genuine "integrated systems", to facilitate remote control of the crane and make it safer and more precise.

The radio controls fitted on Fassi cranes are technologically state-of-the-art in terms of versatility, flexibility and ease of use. They facilitate operation and precise, safe handling of the crane under any condition. They feature an intuitive interface, using a control panel with a wide graphic display that is able to keep all information regarding the crane in constant view. Using the rotary switch device it is possible to access all the crane functions from a single control, which can be used to navigate the menus shown on the display. In this way, as well as providing an intelligent reduction in the size of the device, all the "on/off" buttons normally found on traditional versions are eliminated. This is high performance control technology, carefully designed to optimise working time and particularly reliable in all situations, both on site and off site, thanks also



to an innovative system protecting from electromagnetic fields and radio frequencies.

The basic feature of the new radio control systems is the fact that the receiver is fully integrated with the Fassi crane electronic systems, using Can-bus system. This solution, as well as greatly reducing the number of electronic components, also makes full use of the potential of the new digital control distributors, guaranteeing unbeatable control of movements. The aim of these options is to enrich the range of technology offered by Fassi with specific solutions to meet the actual needs of every operator.



## On a single, wide graphic display it is easily possible to keep all the crane functions under control:

- Activation of the crane on-off controls, switching on of the working lights, checking of truck functions.
- Control and movement of the outriggers (optional, standard on model F510A and above).
- Another important and useful feature relates to control of the winch: the specific load percentage is in fact indicated with precision on the display.
- The oil temperature is another element to be monitored both for operation and safety: the value is detected directly in the oil cooler using a special sensor.
- The load indicators and relevant signals relate to all elements: inner boom, outer boom and hydraulic jib.

- Monitoring the working pressure in the distributor means to keep under control one of the vital functions for operation of the crane.
- Indication of the state of the battery means that the radio control can be used in complete tranquillity.
- Knowing the quality of the radio signal, which is constantly visible on the display, is of fundamental importance to ensure the complete control of the machine by means of radio control.
- A special indicator with a yellow light warns when the crane reaches 90% of its capacity.
  When the 100% is reached, the lifting moment limiting device intervenes and the light becomes red.





## The Fassi RCS and RCH range

The ideal radio controls for cranes fitted with the Evolution electronic system. They are offered as an alternative to traditional radio controls because of their state-of-the-art characteristics, simplicity of use and functionality.

Solutions offered in different versions that differ for size and number of linear levers corresponding to properties and functions. The advantages are considerable for all versions: the operator can count on total control of the operating phases and on the possibility to customise the control handle

according to his needs.

In addition, each radio control gives the security of a reliable and high-precision product, with protected radio system bands. The device is also fitted with a univocal identification code that guarantees it can only be used with its own remote control. The device is simple to use and has every facility: a microprocessor interfaced with the crane control unit on the air, a control panel with a wide display to view information and operating conditions, a rotary switch to select the icons.

RCS maxi 6 functions with 3 joysticks















RCS maxi 6 linear functions

RCS mini 6 functions with 3 joysticks

It has micrometric movements and devices to reduce the I with a large display to view information and operating conditions, a rotary selector to select the icons. manoeuvring speed progressively in four programmable levels. It has an ergonomic and functional design, it is made of shock resistant material with a high level of thermal resistance. The rotary head switch allows handling the main functions with one finger. The Fassi radio control is an electronic technology that responds to all the dynamics of lifting operations.



RCS maxi 8 functions with 3 joysticks

RCH maxi 8 functions with 3 joysticks

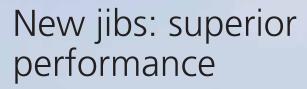
RCH maxi 6 functions with 3 joysticks



RCS maxi 8 linear functions

RCH maxi 6 linear functions

RCH maxi 8 linear functions



Lifting capacities up to a maximum of 8 tons.

Fassi has strengthened its range of hydraulic jibs, so as to come even closer to the needs and requests of users. The products on offer involve both light cranes and the heavier models. In this sense, introduction of the new L61 and L81 jibs is particularly significant. They are both available in versions with 5 or 6 outreach, capable to increase the working performance substantially. The combination with the greatest extension will actually allow reaching over 40 m heights. Another new feature of fundamental importance is the JDP (Jib Dual Power) System, which handles the setting and pressure of the Jib







lifting moment limiting device according to the position of the crane extensions. When working with all the extensions open, the jib is capable of working at standard capacity, whereas when working at a lower outreach and with the JDP activated, its capacity increases considerably.

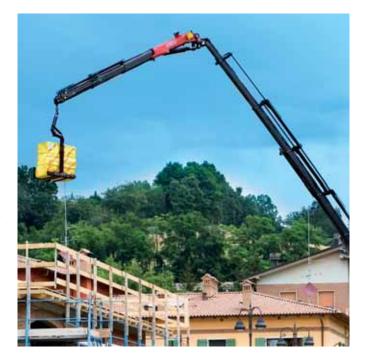
These new features further enrich a range that is already without rival on the market in terms of extent and combinations available, thanks also to the ability to add from 1 to 3 manual extensions according to the model. Fassi provides extremely light jibs with 4 extensions for the double linkage system range of from 13 to 45 tons per meter (from F135A to F455AXP). As the weight of the crane increases, the performance of the jibs also increases, until it is capable of satisfying the needs of even the heaviest cranes, including the top-of-the-range F1500AXP. This means it is possible to have jibs that are suitable for the majority of models and working versions.

All Fassi hydraulic jibs are developed so that they can be folded behind the cab, remaining within the outline of the crane booms. When in the rest position, the hydraulic jib rests on a safety stop to prevent contact and vibration between the carpentry parts of the outer boom and the jib itself. The extension rams are also designed so as to reduce vertical overall dimensions as much as possible, allowing easy access



with the jib booms even to the narrowest locations and those where movements are most restricted.

Another strong point of Fassi jibs is their speed, as they are all fitted with recycling valve. This choice of technology allows the best performance in all working conditions. Great care is also given to safety: Fassi jibs are fitted with integrated lifting moment limiting devices. Synergism with the other additional systems is also studied very carefully. The jibs can be supplied ready fitted with trays for activation of supplementary devices at the tip, like the rotator, the grab and the hydraulic hook. On the front part of the jib, welded to the boom, is a fixed hook attachment for use when lifting maximum load. On the rear part of the jib boom there is a double attachment for fixed hook. It can be used to move loads exceeding the standard lifting capacity of the jib without having to remove it from the crane, simply by folding it completely under the outer boom.



Fassi jibs can take adequate advantage of the Fassi Prolink system. In this way, the outer boom increases its working angle above the horizontal line by a given number of degrees. With the hydraulic jibs it can increase by up to 20 degrees, depending on the model.

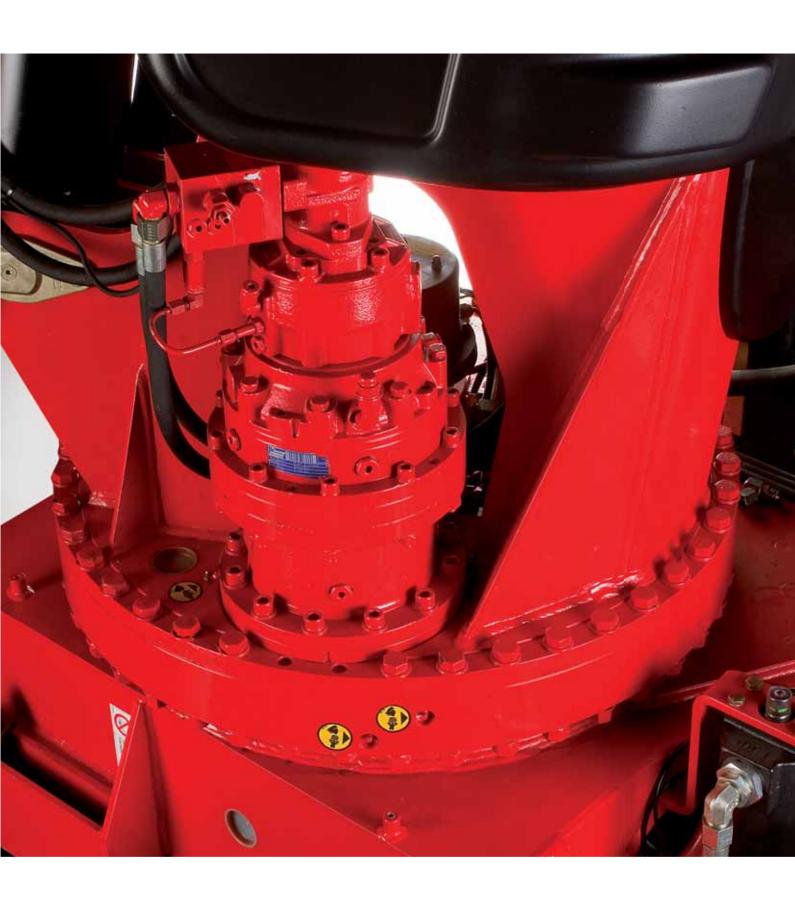


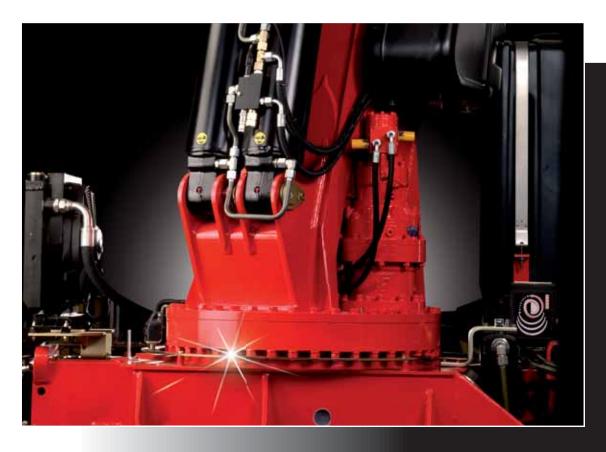
# Turntable or rack, the quality is always Fassi

Fassi provides a range that allows you to select cranes with, turntable or rack while ensuring the same operating performance.

Fassi has always preferred the use of rack and pinion to rotate the columns of its cranes, as this system gives unrivalled performance. The Fassi crane rack system is particularly appreciated because of its ability to bear the weight of even the severest lifting operations without any problem. Suffice to say that, thanks to their superior rotation power, Fassi rack cranes will work without difficulty even on slopes of up to seven degrees. The rack system is therefore ideal for more heavyduty loading and unloading operations. At the same time, the rack system also ensures considerable rapidity of response to controls, and allows 420° rotation. Use of the rack and pinion system is perfectly coherent with Fassi's quality philosophy, which aims to produce extremely reliable cranes that will work hard and cause no problems. It is equally true that the other rotation system, using a turntable, has an exclusive plus: it allows continuous rotation of the column. This means that the crane column can move without ever stopping, in one direction or the other. Logically, this increases working flexibility and also saves time. It must be remembered that the turntable is a system characterised by a bearing on which the column is mounted, coupled to a moto reducer. Fassi has been using the turntable system on certain models of crane. Historically, Fassi was actually the first to use double ball bearing turntable, which are now











widely in use throughout the market.

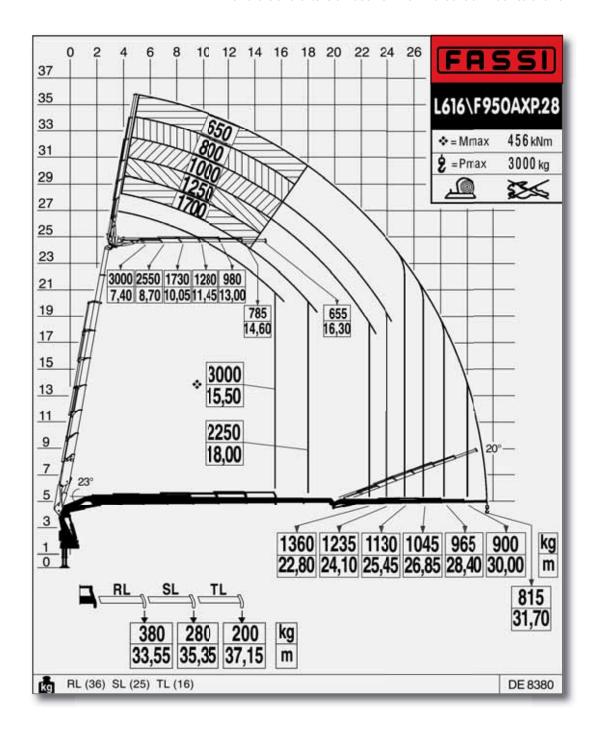
Backed by this experience, and with the aim of getting into harmony with those users who, for various work and other reasons, prefer turntable, Fassi has decided to express itself at the highest level in this technology as well. For this reason, the company contacted the world's industrial leader in the production of turntable, with an ambitious aim: to fit a type of turntable that will be able to produce a rotation torque equivalent to that produced by a rack system. This goal has been achieved. Today, for the first time on the world market, Fassi can offer users a choice between rack and turntable, in a "dual version" range: the technology adopted on the turntable used in Fassi cranes means that even in this case it is possible to achieve performance levels that were in the past exclusive to rack systems.

Currently, the "dual version" range includes the F385A, F415A, F425AXP, F455AXP cranes (outside these models Fassi cranes are all fitted with turntable). Fassi expects to extend the "dual version" range to other cranes as well, in particular the lighter F385A series.

## JDP: the device that increases lifting capacity

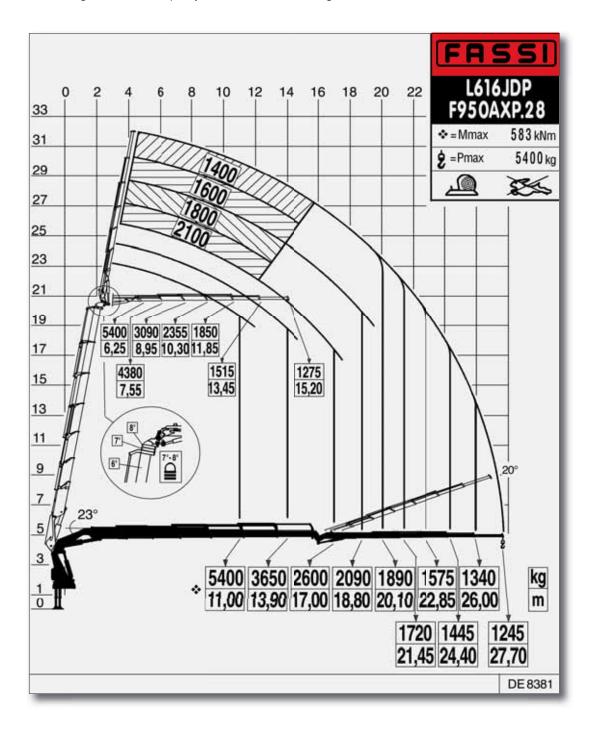
How it works and what this Fassi device offers.

Fassi also extends its "custom" policy to options, with important news regarding jibs. Jib Dual Power follows this philosophy, as it offers set-ups based on the needs of the user, combining higher performance hydraulic jibs. The aim is actually to satisfy the requirements of users, who want to increase performance of the crane + hydraulic jib combination according to the reach of the crane extension booms. The innovative JDP device allows



a considerable increase in hydraulic jib performance, according to the working area. Basically speaking, the device manages different working pressure settings and intervention of the jib lifting moment limiting device, according to the position of the crane extensions. This means that, when working with all seven or eight crane extensions fully out, the hydraulic jib is capable of working at standard capacity, whereas when working at a

lower extension (up to 6 extensions out) its capacity increases, both when the crane and jib are in vertical and when they are in horizontal position. The JDP function can be activated easily by selecting the relevant icon on the display of of the radio control handle. The new Fassi JDP device is currently fitted on some hydraulic jibs on the top-of-the-range crane models.



# F950AXP: a heavyweight that can be operated in full safety

The F950AXP is a crane with a very high loading and lifting capacity, available in versions with up to eight hydraulic extensions, which can be configured with four different models of Jib.









With this crane, Fassi extends and further enhances its range of products in the 80 tm to 100 tm sector, an area in which the company boasts a significant position both in terms of design and quality. Thanks to the maximum lifting moment of 80.1 tm and its tare weight of just 7300 kg (in the .24 version), this "Evolution" model has already gained the first step on the podium for the best weight/power ratio in its category. This means it represents a real reference point for the market.

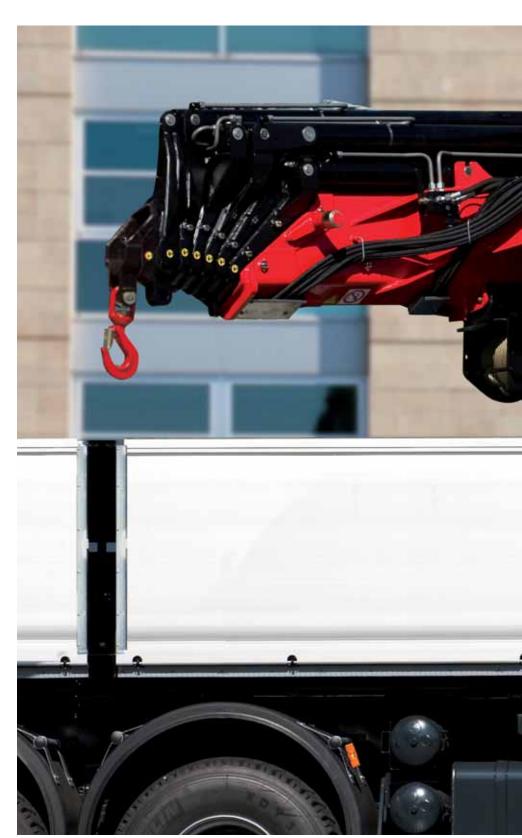
The F950AXP is a product that is exclusive three times over: for its design, for its performance and for the excellence of the components and materials used. It is to all intents and purposes a highly evolved and extremely sophisticated technological "giant", featuring the best devices for automation and electronic handling of operating functions. An example of this is the exclusive Fassi Double Link Technology system which, when combined with the Prolink device, increases the opening of the secondary boom by 12 degrees and that of the jib by 20 degrees, for operations inside buildings and in places with restricted headroom; the XF device, Extra Fast, which allows exceptional speed and manoeuvrability directly from the radio control; the XP Extra Power system, which gives the crane a reserve of power that can be used in the most extreme, demanding situations.



But that is not all. Fassi also provides the F950AXP with the further added value of power, functionality and performance. The innovative Jib Dual Power (JDP) device allows a 30% increase in hydraulic jib performance, according to the working area. This is possible because the device manages different working pressure settings and intervention of the jib lifting moment limiting device, according to the position of the crane extensions.

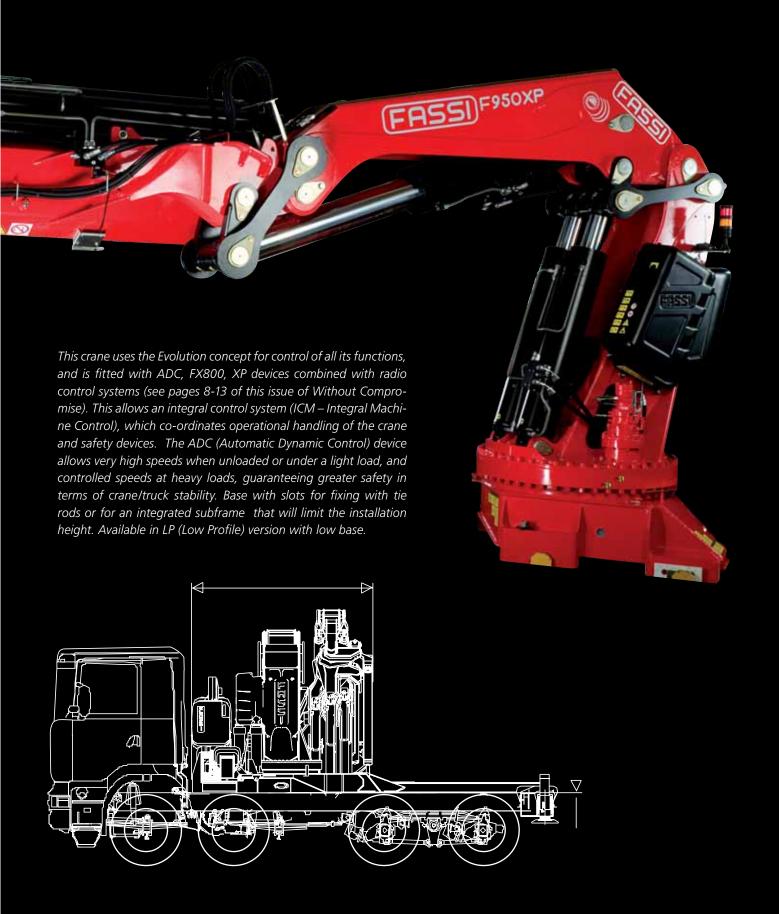
Using such a high performance crane might cause some worries in terms of utilisation easiness. But in the case of the F950AXP the boot is on the other foot. The crane is as docile and easy to manoeuvre as much lighter models, thanks also to the presence of the electronic flow sharing device. All the functions are easy to use and activate. For example, the radio control has a control panel and display for quick selection and graphic viewing of the working information. With a simple "click" on the relevant icon, the JDP system can be activated or deactivated directly from the remote control button pad. The remote control device is also fitted with an IMC (Integral Control Machine) system, designed exclusively by Fassi, which is capable of processing a huge amount of information in real time and managing the best possible operating conditions for the specific working situation in a fully automatic manner.

Thanks to the modular nature of all versions and the high technological content that characterises it, the F950AXP can easily be used in all fields of application and for any operating requirement, always guaranteeing the safety and reliability certified by the Fassi brand name, both for the vehicle and for the people operating it.









## Working at 2000 metres

A Fassi F660AXP on Man 8x8 at work in the Dolomites, to carry out maintenance on 220 kilometres of ski-lifts and complete the largest ski park in Europe.

The beauty of the mountain scenery and the recognised excellence of its ski slopes make the Dolomites the most popular destination for European winter sports tourists. In this scene the "Dolomite Superski" circuit stands out in particular, with over 220 km of pistes frequented every year by millions of people, and a source of constant growth in the area. It is obvious that something like this, with its countless ski-lifts and infrastructures, requires careful, constant and high quality maintenance, accompanied by work for the construction of new elements.

In Val di Fassa alone there are around thirty ski-lifts of various lengths and carrying capacities.

This is something of which S.I.T. (Società Incremento Turismo) is well aware. This Trento business, with a current staff of 160, has been responsible for development and maintenance of Dolomite Superski in the Trento area for over 40 years. The company recently added a Fassi F660AXP crane to its list of working machines, and this crane is now the one with the highest performance in the whole fleet.



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The crane operates in combination with a MAN 8x8 truck, with four wheel drive on all axles, equipped with a removable system that foresees three different set-ups: one involving the crane with 6 hydraulic extensions and 5 extensions on the jib, with the option of adding a basket for operators, with a construction tipper body; the second with a rear mine tipper body, used to transport rocks and heavy materials; the third with a low loader deck to transport machinery and diggers, but also snow cats. It is possible to change from one set-up to another in approximately ten minutes, and the whole operation can be carried out by a single person, thanks to a special hydraulic release, with rams to support the tipper bodies and outriggers for the crane.

The idea of switching to a solution of this kind came from Gerax, the local Fassi dealer, who drew up a clear picture of SIT's working requirements and proved itself a true partner, helping the customer on the question of intelligent and high performance lifting.

In this sense, it is necessary to take into account SIT's main activities. Review of plant is an operation that must be carried out on a regular basis, and is completely essential. It alternates general checks and more in-depth controls on the quality of every component in the skilift systems. This, in short, involves dismantling all the rollers from the pylons so that they can be replaced or repaired in the workshop, and then reassembling them to a high level of precision. This job requires the use of suitable equipment to move and lift loads (consider that the smallest of the rollers does not weigh less than 1.5 T). All this, multiplied by the number of pylons in a typical ski-lift (between 15 and 18).







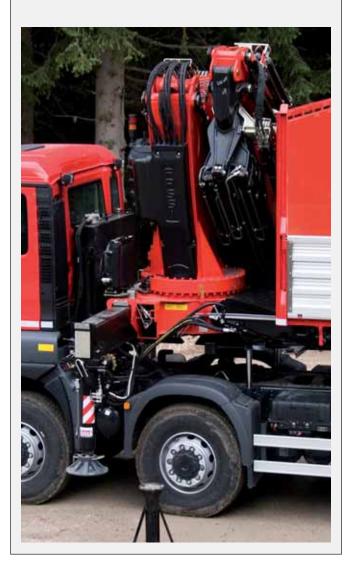
This is why SIT, the main company in this sector within the Trento Dolomites area in terms of organisation and quality of operation, has chosen Fassi quality. The need to purchase the F660AXP derives from a desire to update the company fleet to suit plant evolution. This is because, in recent years, the materials and devices used in the ski-lifts have become larger and larger, and the weight of all components has increased considerably as a result. This resulted in the need to invest in machines and equipment capable of bearing sustained loads, of working on unstable terrain and above all of guaranteeing the highest possible levels of safety for operators. Working on skylifts at altitudes of over 2000 meters, on difficult and frequently impervious terrain such as that in question, requires quite unique organisational, operating and safety measures.

In short, it is an investment that has given back much more than the initial expenditure value, even on a short term basis. This is because the ability to count on three different installations for a single truck has meant a reduction by over one third in operating times, the use of manpower and the levels of risk involved.

With the F660AXP it is possible to carry out "high level" operations and then, in just a few minutes, make use of the tipper body to load and unload excavation materials, or the low loader deck to transport machinery and working equipment. With the help of the Fassi F660AXP the number of working options have been extended: as well as fitting and dismantling components, this crane also allows other complex operations such as installation of snow cannon systems, construction of bridges, transport and movement of cabins and chairlifts. It is something completely different from the traditional pallet transporter, allowing a halving of working times and effort.

## FOCUS: Can be dismounted in just a few minutes

The MAN 8X8 truck on which the Fassi crane is mounted is fitted with a dismounting system that allows three different set-ups: the first involves a normal building tipper body and the ability to fit the crane with an operator basket; the second set-up involves a rear mine tipper body, used to transport rocks and heavy materials; the third uses a low loader deck to transport machinery, such as diggers or snow cats. It only takes ten minutes to change from one set-up to another. The operation can be carried out by a single person, thanks to a special hydraulic release, with rams to support the tipper bodies and outriggers for the crane.











## "Baustoffe" range: from 13 to 22 t/m, Fassi cranes for the German building industry

Fassi's answer to the requirements of the German building market.

Part of Fassi's manufacturing philosophy is to produce cranes that will respond specifically to the needs of certain markets. Fassi considers the working culture and habits of various geographical areas, and offers solutions that will suit these situations. A significant example of this can be seen in Germany. In Germany, the lifting market has one of its most important reference points in the building industry. Compared with the situation in other nations, transport of building materials is organised using tried and trusted load moving systems, which form part of the working culture in this sector. These professional habits and uses translate

into specific requests for those selling industrial vehicles and cranes. A significant example of this is the widespread use of "Baustoffe" cranes, which are machines that are not folded and are never in the typical rest position, remaining permanently extended on top of the body. Baustoffe were created to speed up the job of loading and unloading material stocked on pallets. For this reason, the crane is fitted with special forks, grabs or clamshell buckets. The crane boom is particularly long, and is thus able to pick up the double packs of pallets positioned in the body of the vehicle. The Fassi Baustoffe range, with cranes from 13 to 22 t/m, is

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## **The Fassi AS Series**

Fassi's Baustoffe range is marked with the initials AS. The AS series currently includes 12 versions of crane with lifting capacities of from 13 to 22 t/m. These are designed to speed up the work of loading and unloading material stocked on pallets, in particular building materials. The cranes are fitted with a long boom, and can be equipped with fork, grabs and clamshell bucket. In these cranes, the well known quality of Fassi meets the expectations of users, primarily those on the German market, who frequently require a rapid sequence of movements.



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aimed at transport companies specialising in building materials, and companies that transport building materials stocked on pallets directly to their work sites. The high working speeds of Fassi Baustoffe cranes guarantees efficient, economic movement of building materials. The rapid sequences of movement ensure that these cranes are always capable of keeping up with the situation, and can be relied on at all times. Appreciation is also growing in Germany for Fassi's K range, destined to satisfy another commercial need for fitters that is also widely felt on the German market: the use of bodies of standard length and production, in which the extended crane fitted with clamshell bucket remains within the internal dimensions of the body itself. These are shorter cranes than the Baustoffe. fitted behind the cab. The main customers for these cranes are building constructors, transport companies dealing with inert materials, and municipal companies. Among the most common jobs carried out with this type of crane are road maintenance and green area maintenance operations (road edges, gardens, flowerbeds, etc.), involving frequent and repeated movement, loading and unloading of sand, gravel, earth, all using the bucket. The K range comprises 15 crane versions, from 6 to 15 t/m.

## **FOCUS on the Fassi F65AK**

This light-weight crane is perfectly suited to the need to move building materials stocked on pallets. Fitted with fork, grabs or clamshell bucket, it allows high working speeds and guarantees efficient, profitable operation. It combines excellent lifting performance with a limited weight. It is ideal on vehicles that also have to work in more restricted, difficult road and site locations

It is available in two versions, with one extension (F65AK.21) and with two extensions (F65AK.22).



EASY TO USE

**DESIGNED TO PERFORM** 

**MADE FOR YOU** 

**QUALITY OF PARTNERSHIP** 

**QUALITY OF TRAINING** 

**QUALITY OF INVESTMENT** 

**LEADER IN AUTOMATION** 

THE SAFETY CHALLENGE