

## FSC/CRANE MODELS MATCHING TABLE

	FSC/S	FSC/M	FSC/L
Micro	○	○	●
F22A active	○	○	●
F28A active	○	○	●
F30CY active	○	○	●
F38A active	○	○	●
F40A active	○	○	●
F50A active / e-active	○	●	●
F55A e-active	○	●	●
F65A active / e-active	○	●	●
F70A e-active	○	●	●
F80A active / e-active	●^	●	●
F90A e-active	●^	●	●
F95A active / e-active	●^	●	●
F105A e-active	●^	●	●
F110A active / e-active	●^	●	●
F120A e-active	●^	●	●
F135A active / e-active	●^	●	●
F135A dynamic / e-dynamic	●^	●	●
F155A active / e-active	●^	●	●
F155A dynamic / e-dynamic	●^	●	●
F165A active / e-active	●^	●	●
F165A dynamic / e-dynamic	●^	●	●
F175A active / e-active	●^	●	●
F175A dynamic / e-dynamic	●^	●	●
F195A active / e-active	●^	●	●
F195A dynamic / e-dynamic	●^	●	●
F215A active / e-active	●^	●	●
F215A dynamic / e-dynamic	●^	●	●
F235A e-active	●^	●	●
F235A e-dynamic	●^	●	●
F245A active / e-active	●^	●	●

	FSC/S	FSC/M	FSC/L
F245A dynamic / e-dynamic	●		
F275A e-active	●^	●	●
F275A e-dynamic	●		
F295A e-dynamic	●		
F295RA e-dynamic	●		
F315A e-dynamic	●		
F315RA e-dynamic	●		
F335A e-dynamic	●		
F335RA e-dynamic	●		
F365A e-dynamic	●		
F365RA e-dynamic	●		
F385A e-dynamic	●		
F385RA e-dynamic	●		
F415A e-dynamic	●		
F415RA e-dynamic	●		
F425A e-dynamic	●		
F425RA e-dynamic	●		
F455A e-dynamic	●		
F455RA e-dynamic	●		
F510RA e-dynamic	●		
F560RA e-dynamic	●		
F600RA e-dynamic	●		
F660RA e-dynamic	●		
F700RA e-dynamic	●		
F800RA e-dynamic	●		
F950RA e-dynamic	●		
F1100RA e-dynamic	●		
F1300RA e-dynamic	●		
F1500RA e-dynamic	●		
F1950RA e-dynamic	●		

● = available , ○ = not available, ●\* = available only with FX, RCS/RCH radio remote control and hydraulic extension of the outriggers



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COMPANY  
WITH QUALITY MANAGEMENT  
SYSTEM CERTIFIED BY DNV  
=ISO 9001:2008=

CPZ 04/2011 R.01

FSC / S  
FSC / M  
FSC / L



FASSI STABILITY CONTROL



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# FASSI STABILITY CONTROL

## UTMOST CONTROL OF STABILITY CONDITIONS

Fassi has developed the FSC "Fassi Stability Control" systems, available in different executions specifically designed for each crane type, in order to best satisfy Machine Directive 2006/42/EC and the application of harmonized technical standard EN 12999:2011, which requires for cranes having a lifting capacity of at least 1000 kg or a lifting moment equal and above 40000 Nm the integration of vehicle stability control in the safety function carried out by the lifting moment limiting device.

These systems differ according to crane models and respective configurations. In particular, the S (Super) version, featuring fully automatic management and installable exclusively on cranes equipped with (1) FX500 or FX800 electronic device, (2) RCH or RCS radio control, hydraulically-extendable outriggers, is a completely innovative product from an engineering and functional standpoint, and consequently worthy of a thorough and in-depth discussion.

New technological opportunities, innovative spirit and regulatory drive are the main factors that represent the cornerstones of the Fassi stability control system. This is why Fassi's offer, in addition to satisfying new regulations issued by the European regulatory body (CEN), takes into account the various peculiar features of the range, offering a system with different executions depending on crane models. This electronic system significantly improves crane control conditions, thus making it easier to use the crane. By working with Fassi cranes under conditions of safety, you can be sure to have excellent use versatility combined with the best lifting capacity.

The FSC system automatically limits crane operation in the event that all conditions needed to ensure its stability are not satisfied: extension of the lateral supports and positioning of the outrigger rams. This is done through two devices: (3) the proximity sensor for the outrigger rams and (4) the micro-switch cable reel that detects the complete exit of the lateral extension support. The operator is placed in the condition to monitor every passage. Information about crane status and the authorization to use the crane once stabilization has been achieved are shown on the radio control display and on the user panel display on the crane: (5) and (6).

## CONTROL OF THE RE-ENTERED CONDITION OF OUTRIGGER SUPPORTS

In compliance with standard EN12999:2011, all Fassi cranes feature maintenance of the mechanical safeties of the lateral extension outrigger supports with manual extension for the fully retracted position, while for those equipped with hydraulic extension the mechanical stop is replaced by a sequence valve. The control of the re-entered condition of the lateral extension stabilizer supports is monitored by peripheral sensors that send back the signal to a display panel positioned in the driver's cab by means of a visual and acoustic indication that they have been completely re-entered.



## EASY READING OF STABILITY CONDITIONS ON A DISPLAY

The operator's control of crane utilization conditions is facilitated by easy and quick reading, on the (5) display of the radio control and of the (6) user panel onboard the crane, of the activation levels of the moment limiting device in the two lateral areas of the vehicle. Side detection is referable to the signalling plate affixed to the radio control pushbutton panel and nearby the outriggers distributor.

## VERSATILITY

For the FSC/S version, depending on the work positions of the outriggers lateral extension supports and the tilting angle of the crane base, an automatic derating occurs in terms of crane performances, of activation the lifting moment limiting device and of working speeds.

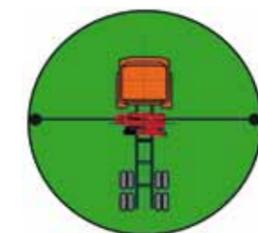
## CONTROL AS WELL AS IMPROVED EFFICIENCY

Compared to other systems, the Fassi FSC/S version introduces more sophisticated safety management: it carries out a double stabilisation check by verifying the position of the outriggers lateral extension supports and of the base (7) tilting angle thanks to tilting sensor with double XY axis. As a whole, the system is highly versatile, and it always privileges and ensures the highest crane performances under conditions of total control.



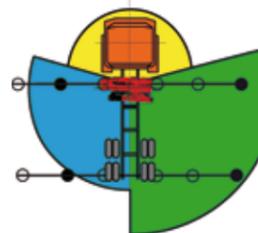
## FSC/L

The FSC/L system can be installed, as an option, on cranes from the Micro range to model F275A e-active. It can be fitted on models equipped with both hydraulic HO and electronic FX lifting moment limiting devices. It does not include a differentiated management of the work areas and a distinction between left and right work area with respect to the vehicle. The system checks the position of the outriggers lateral extension supports (of the crane and, if necessary, of the additional crossbeam) and the placing in position of the relevant outrigger rams in the work position, authorizing crane use only if the lateral extensions are completely extended on both sides and the outrigger arms are working on the ground.



## FSC/M

The FSC/M system can be installed on cranes from F50A active/e-active up to F275A e-active. This system can only be mounted on cranes equipped with FX500 or FX800 electronic device. The system detects the left and right work areas of the vehicle, and manages the lifting moment limiting device for two work areas (differentiated limiting device: above the body with maximum capacity and above the cab with reduced capacity), and two (M1 version) or three (M2 version) different levels of activation of the lifting moment limiting device according to the position of the outriggers lateral extension supports.



## FSC/S

The FSC/S system is factory-fitted for the crane range from model F245A dynamic/e-dynamic up to model F1950RA he-dynamic. It can be installed, as an option, on all the other crane models that they are equipped provided with FX500 or FX800, RCH/RCS radio control and hydraulically extendable outriggers. The system detects the right and left work areas of the vehicle and automatically manages the lifting moment limiting device for two work areas: above the cab and above the body, the existing stability on the two sectors permitting. In both sectors, the lifting limiting device system starts working on its own based on the position of the outriggers lateral extension supports (closed, partially or fully extended) verified by means of the linear encoders. Moreover, a tilting sensor that measures the horizontal position of the crane with reference to the inclination of the crane base crossbeam, everything managed by dynamic software, limits crane performances and protects the different working configurations with respect to the sector the crane is in, the outriggers position/extension and the inclination of the crane base. When the outriggers are not fully extended, the lifting moment limiting device activation pressure is recalculated and reduced and, according to the position of the crane arms, there may be a reduction in the working speed. The additional crossbeam, on the other hand, is managed for fully extended or retracted or partially extended outriggers if the additional crossbeam has double lateral extension supports. Moreover, the system can automatically read the effect of a possible counterweight and the presence of additional outriggers in addition to the ones foreseen.

