

NEXT LEVEL

A NEW SERIES OF FORWARDER CRANES FC6 / FC8 / FC10 / FC12 / FC16

Issue 3, May 2013



CIS CRANAB
INTELLIGENT
SYSTEM

NEXT LEVEL INDEX

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CIS CRANAB
INTELLIGENT
SYSTEM

UNREALLY GOOD

How do you incorporate a true passion for forestry in new and improved technology? We focussed on our customers' needs - the users that regard the forest as an important part of the solution for the future.

Then we took our findings into the workshop and created Cranab's new forwarder crane series. Made for contractors who make the impossible possible.

YOUR REALITY IS ALWAYS ON OUR MIND WHEN WE CREATE NEW TECHNOLOGY

It takes only a matter of seconds to remember the impressions made by FC6, FC8, FC10, FC12 and FC16. In just a few moments you'll understand that they are made to be of real use. They lift higher, faster, with heavier loads and with greater precision than ever before. The new FC cranes are only the start of something new and ground-breaking - especially the driving properties and consideration for a user-friendly operator's environment.

World-leading technical development from people who live and breathe modern forestry. Sheer job satisfaction delivered by the company right in the middle of the great forest.





WHEN THE CLOCK'S TICKING DOWN YOU'LL CATCH YOURSELF RELAXING

Truly efficient and harmonic work calls for a service-friendly crane. This is something contractors can subscribe to, and it's a motto we live up to. The new FC can be serviced out in the forest, quickly and simply.

Cranab works in close cooperation with forest owners and contractors, and we know the importance of preserving natural values. That's why we have also been chasing climate-smart improvements in the development of the new FC. The manufacturing process itself, for example, is resource and energy-saving. Another example is spray-painting, now with significantly less use of solvents.





THE INTELLIGENT CRANE IS HERE

We are proud to present the *Cranab Intelligent System*, CIS. A system comprising of built-in sensors in our cranes for slewing, lifting, boom and telescopic functions. This makes the cranes safer and more efficient and can also mean a shorter learning process for new operators. The system meets the higher requirements of environmental consideration, productivity, safety and flexibility.

The advantage of sensor technology is to constantly know where all the parts are, from the slew out to the crane tip. This is what we call the *Cranab Intelligent System*.

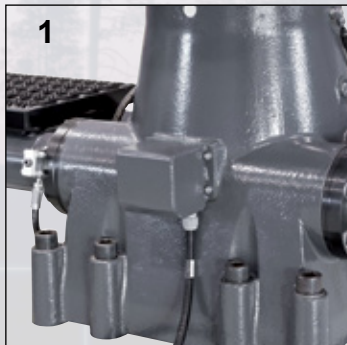
The system consists of non-contacting analogue or digital sensors, and is protected by being fully integrated in the crane. It is available on all cranes in the new FC series in both single and double telescopic versions.

Automating recurring movement patterns

In its most advanced form the sensor technology gives intelligent control of all the crane's functions, so-called crane-tip control. Certain recurring movement patterns can be fully or partly automated to make things easier for the operator, creating a good working environment.

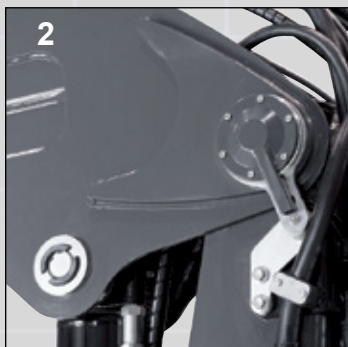
A safer working environment

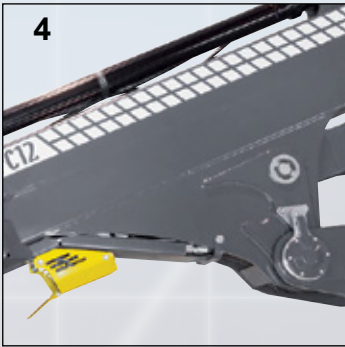
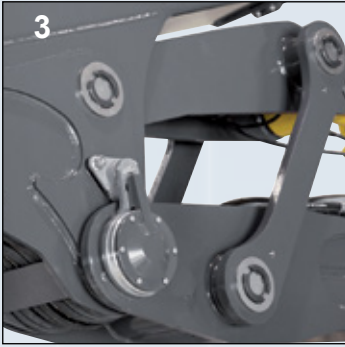
The sensor technology increases safety in your working environment. Preventing collisions with, for example, the cab or poles in the cargo space. It also allows cylinder end-cushioning that reduce machine wear and contributes to a better working environment.



1. Protected, yet easily-reached slew sensor.
Thanks to its location the slew sensor is well protected against external damage, at the same time being easy to reach.

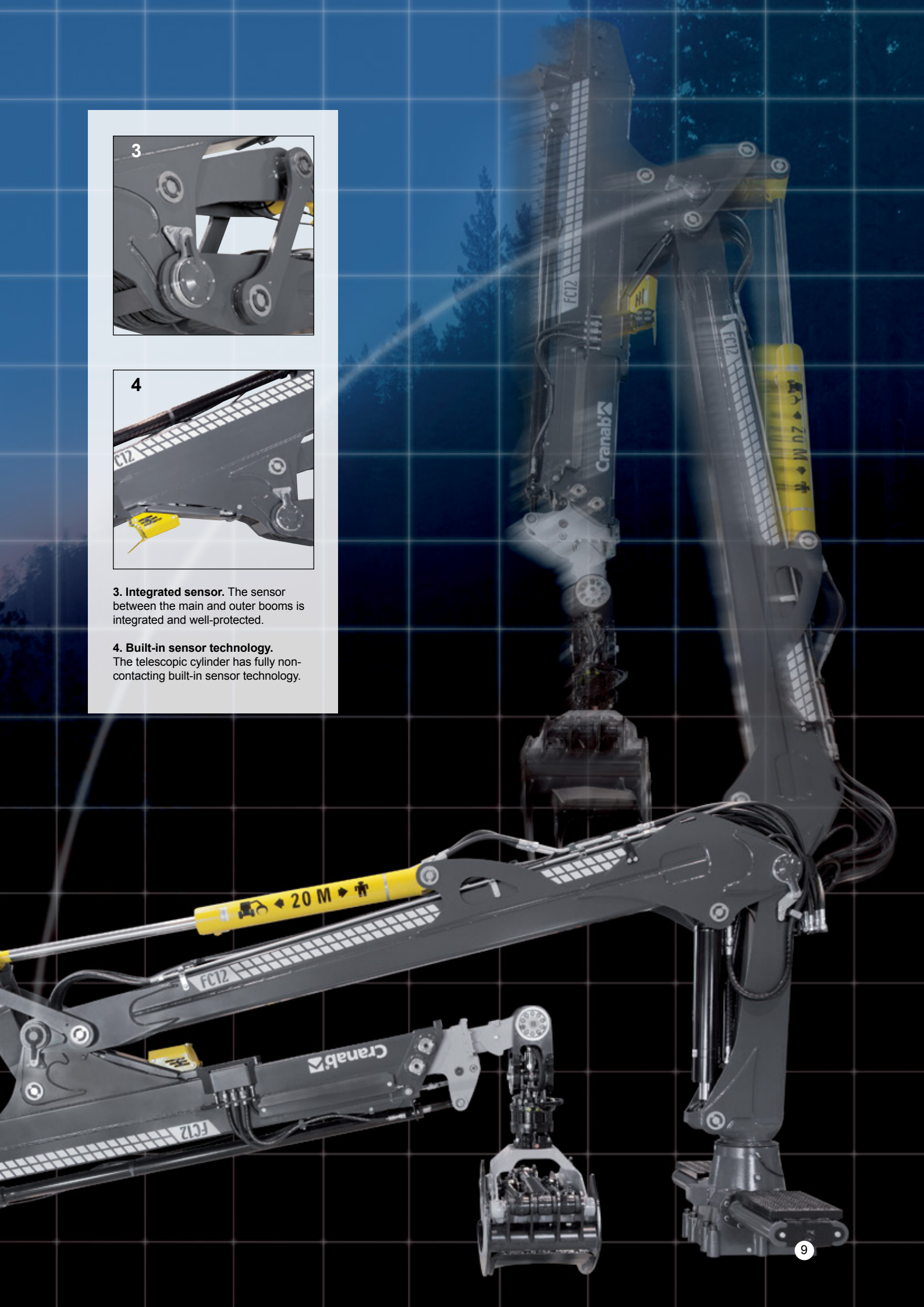
2. Sensor between pillar and main boom.
The sensor is installed in a stable location to withstand the tough environment.





3. Integrated sensor. The sensor between the main and outer booms is integrated and well-protected.

4. Built-in sensor technology. The telescopic cylinder has fully non-contacting built-in sensor technology.



WHEN YOU CLOSE THE CAR DOOR AND SEE YOUR NEW CRANAB, BRING YOUR DRIVING EXPERIENCE AND PLEASURE ALONG

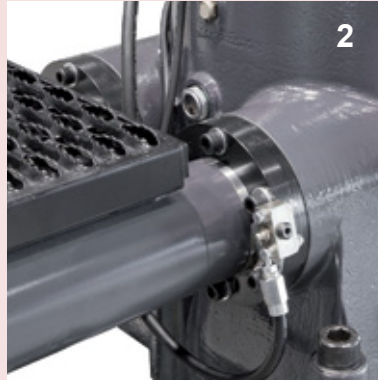
The new FC-series brings precision and dependability to the forestry machine. Low weight and a compact construction were highly-prioritised factors during the development phase. All to create a complete and well-planned driving experience, with efficiency at every step, every day. Fingertip sensitivity right the way out to the log, giving you the right speed and fluidity of motion.

The contractors' expertise and requirements for precision have been decisive for Cranab's development since 1960. The new FC-series proudly carries this tradition onwards. Designed to suit many different types of needs and forestry machines. Equipped with two extra lines to the crane nose to meet the forestry needs of the future, and with a parking position that symbolises the concept of a Cranab crane. It has to be durable, efficient and well-planned. Precisely as modern forestry management has to be.



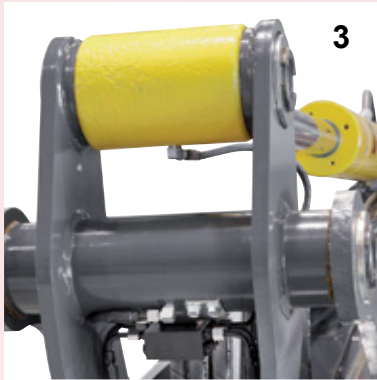


1



2

1. When you see this pillar - there's efficiency at work. The new FC-series design is developed to save our customers seconds, centimetres, and kilos every step of the way. The new pillar solution makes the crane lighter, takes less space and lifts higher. The slewing engine housing is generously dimensioned - to give the most power where it's needed.



3



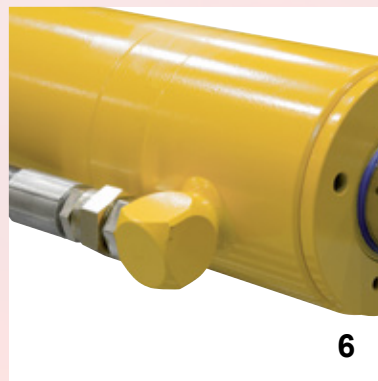
4

2-3. Safe maintenance work. The FC series has lubrication points for all dynamic bearing points up to the outer boom bearing. Lower positioned lubrication points are available as an extra feature for all models. Lubrication nipples and hoses are well-dimensioned and protected. All to withstand the tough environments our cranes are made for.

4. Adapt range of lift according to machine. The FC-series has a range of pillar heights, allowing an optimal configuration for each machine. In other words - the possibility of creating the optimal geometry.



5



6

5. The four-point linkage between the main boom and outer boom give the outer boom a constant movement and speed over the full range, which also provides excellent working ergonomics close to the machine.

6. Top class cylinders. Tough testing at an advanced level enable you to lift both higher and safely. Cranab has invested in quality and service life through the design of connectors and welded joints.



7

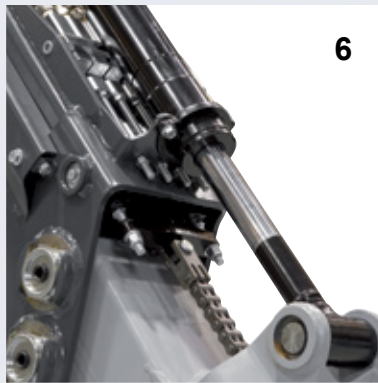
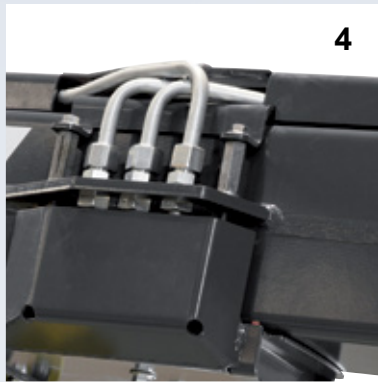
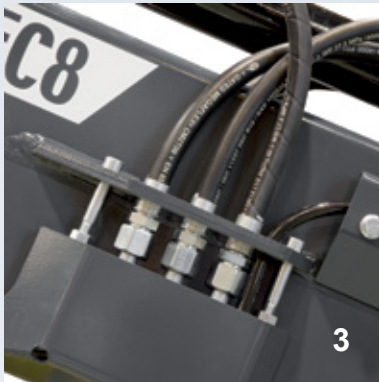
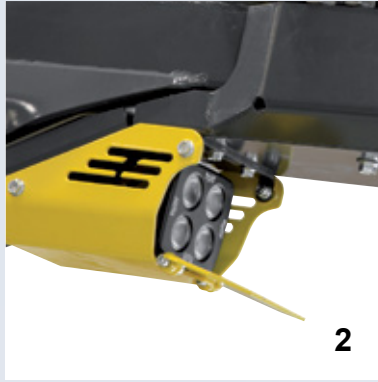
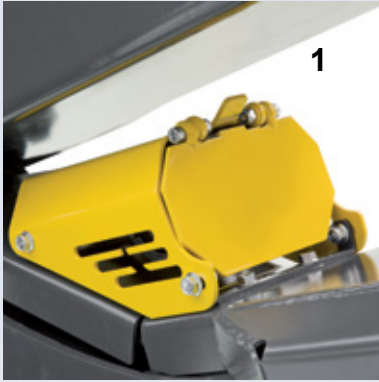
7. Smart crane, easy to park. As we constantly have user-friendliness in focus, we naturally keep in mind how the crane is to be parked and transported as carefully as possible. It is folded down to its maximum extent and is then properly parked.

USING A SLIGHT TILT WE HELP YOU TO AIM HIGHER AND GET A BETTER LIFT AT WORK

Raise your sights and enjoy trouble-free working. The new FC-series affords even better operating qualities. Sensors and intelligent applications make life easier for the driver, and we have also thought about solutions closer to the ground. The newly-developed crane pillar in a profile design and the extended main boom, for example, give significantly improved lifting qualities. It's now easier to avoid peak height - add the new geometry of the crane and the result is simpler loading close to the gate.

A lot of work lies behind a new, technically advanced forwarder crane. The new FC-series contains many small differences that together create an efficient total solution. New features that enable the driver to better concentrate on the task at hand. The FC-series is the latest proof for us who work with forestry technology in Vindeln of what contractors already know - the passion for forestry can give purely magical results.





1-2. Strong emphasis at work. How about a spotlight on the arm joint that is constantly directed towards the grapple? An optional extra with a well-protected and smart location that contributes to increased productivity.

3-4. Greater diameter, faster work. A Cranab crane is in many respects about well-proportioned margins. Generally speaking, we have chosen larger-diameter hydraulic hoses as we know that greater flow and low loss of pressure are crucial to fast and energy-smart working.

5. Optimal hose tension. Individual tensioners for all the hoses in the outer boom enable optimal tensioning for each hose routing. A very important detail for the service life of the hose and the crane's efficiency.

6. Telescope with external cylinder – better. The solution facilitates the connection of the ample and energy-smart hose dimensions, which provide the constant speed and flow you need. The new FC is more robust than ever. One example is the use of larger-sized chains chain attachments made from solid metal and that are routed laterally.

7-8. Braking in both directions. The FC series has both an active and a mechanical brake-link that brakes in both directions. The braking effect can be set manually using the mechanical brake. The active braking function is first activated when you need it; primarily during high energy movements that make the grab sway. The active brake is not activated whilst sorting and picking; the grab is free and movable. The FC series also features a boom tip solution in which the hose routing is well protected inside the boom tip to reduce the risk of hose damage.

YOU'LL WANT TO OUTPERFORM YOURSELF EVERY SHIFT

Not one single detail has been too small for discussion and analysis. However, the results fly in the face of convention concerning most facets of what can be demanded of an forwarder crane. The new FC represents the highest industry specifications at all levels.

After you as a contractor have been working hard with your machine, just think about all the tests the new FC has been put through. Heart-breaking, painful lifting movements, twists, turns and max loads. All to outperform even tomorrow's dependability requirements. Cranab's goal remains firm - to lead the world forwards from Vindeln in the field of crane production for the forestry industry.

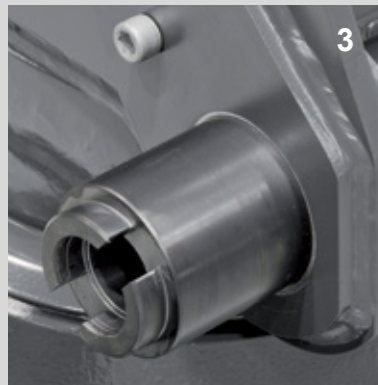
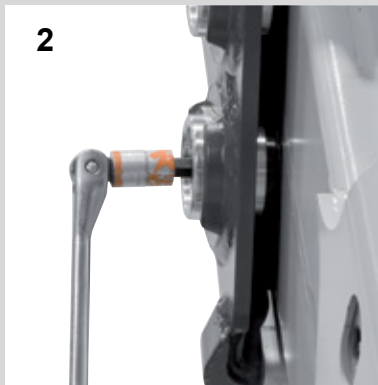


1. Internal hose routing. Cranab was the first with this obvious solution - well-designed internal hose routing that protects the lines. The development has given Cranab the opportunity to design products with hoses that can operate at higher pressures.

2. Individually adjustable slide blocks in the outer boom. Adjustment is easily accomplished from the outside using an Allen key - less awkward, it gets done more often resulting in a more steady crane and more efficient operation. Moreover you avoid having a crane that is subject to unnecessarily fast wear-and-tear due to play. In addition there are disc springs that maintain tension. The slide blocks themselves are made from synthetic material and are completely maintenance-free.

3. Harder pins. In order to avoid operating with your foot on the brake pedal completely unnecessarily we have reduced the friction through using pins with the highest degree of hardness. It also reduces the wear on cylinders, bushings and bearings.

4. Generously designed bearings – something we at Cranab see as a necessity. Just as important for the service life of the crane are our requirements for limited tolerances and good surface smoothness.





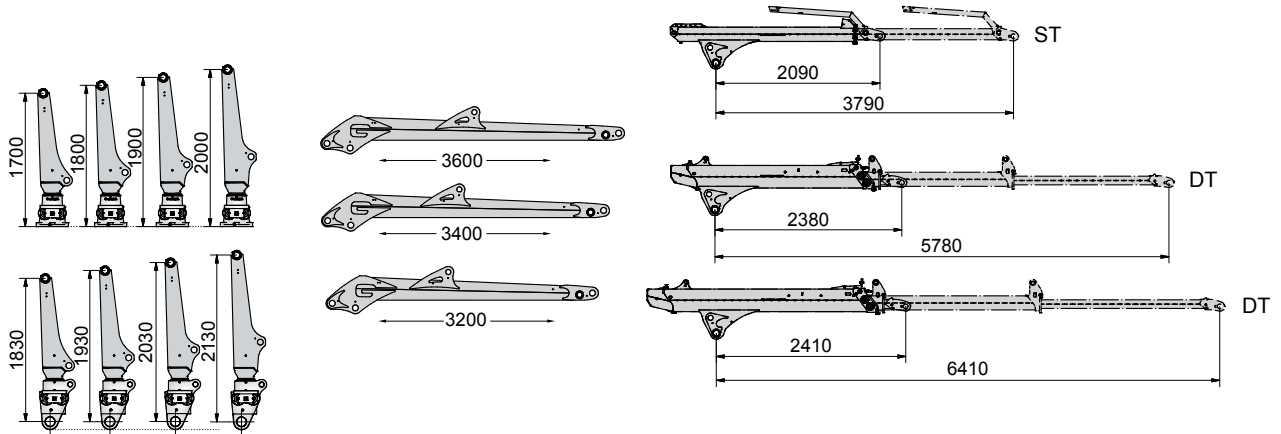
5. NEW pin-locking with rust-protection on all parts.

6. New sealing system for the entire crane. Our new forwarder cranes have hydraulic hoses that seal tighter thanks to soft-sealing hydraulic connections (ORFS standard), which are commonplace in other demanding industries. The technology has a positive environmental effect, and the crane becomes cleaner and more eye-catching.

7. Strength you can depend on. All cranes and cylinders in the new FC-series are designed to meet the toughest challenges imaginable. We manufacture our cranes from high-quality steel with a high tensile yield limit and impact strength. The welding process is to all intents and purposes robotised, and we place great attention to welds and weld finishes, which are paramount to the service life and give stronger structures.

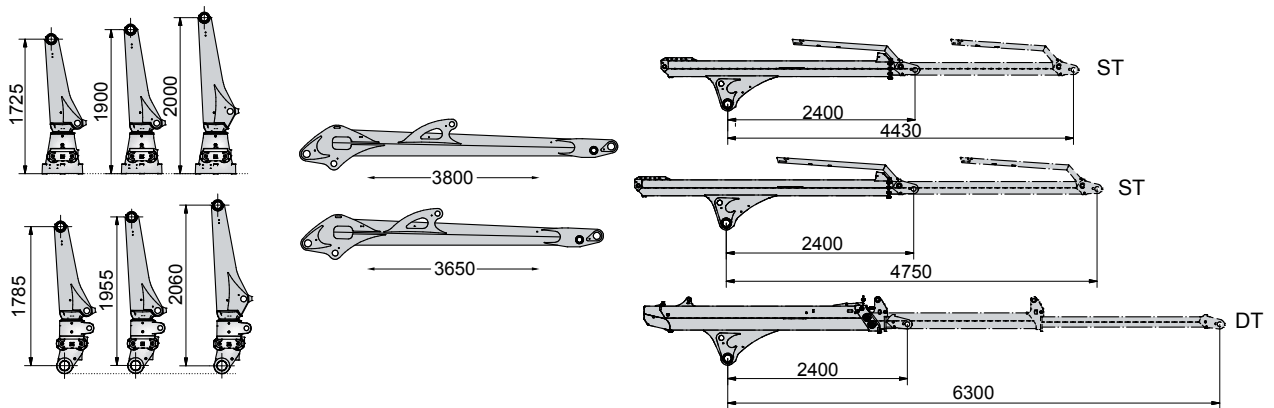
CRANAB FC6 AND FC8

Rotator 101



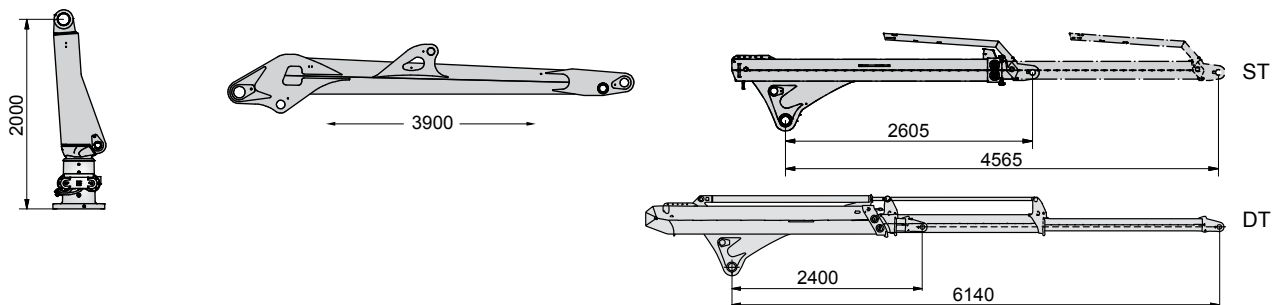
CRANAB FC10 AND FC12

Rotator 121



CRANAB FC16

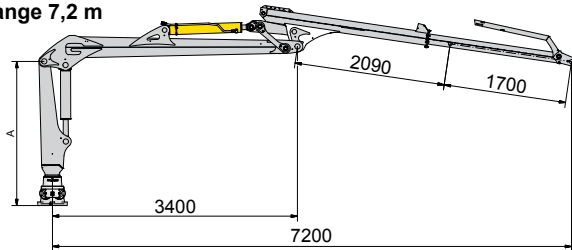
Rotator 121, DT
Rotator 171, ST



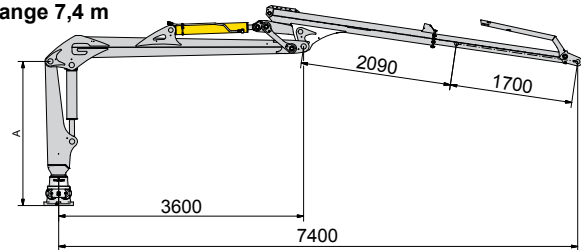
CRANAB FC6 AND FC8

	FC6 – SINGLE TELE	FC8 – SINGLE TELE
MAX RANGE	7,2 m	7,4 m
Lifting moment, gross	67 kNm	87 kNm
Lifting moment at crane nose at range	7,2 m 5,5 kN 5,5 m 7,3 kN 3,0 m 14 kN	7,4 m 7,6 kN 5,7 m 10 kN 3,0 m 19,4 kN
Boom extension	1,7 m	1,7 m
Torque moment, gross	22 kNm	22 kNm
Angle of rotation	370°	370°
Working pressure	23,5 Mpa	23,5 Mpa
Recommended flow	90–150 l/min	90–150 l/min
Weight with lowest pillar elevation <i>Excl. grapple and rotator</i>	1235 kg	1255 kg

Range 7,2 m

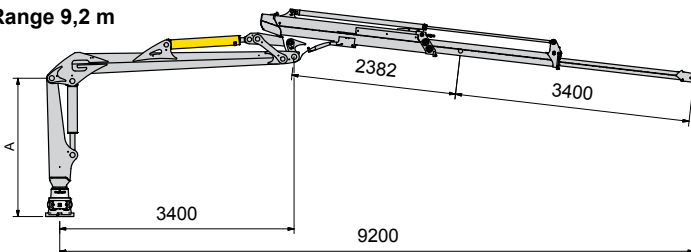


Range 7,4 m



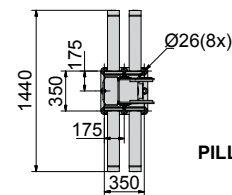
	FC6 – DOUBLE TELE		FC8 – DOUBLE TELE	
MAX RANGE	9,2 m	10,0 m	9,2 m	10,0 m
Lifting moment, gross	67 kNm	67 kNm	87 kNm	87 kNm
Lifting moment at crane nose at range	9,2 m 3,4 kN 5,8 m 6,1 kN 3,0 m 12,4 kN	10,0 m 2,7 kN 6,0 m 5,4 kN 3,0 m 11,9 kN	9,2 m 5,4 kN 5,8 m 9,2 kN 3,0 m 17,7 kN	10,0 m 4,6 kN 6,0 m 8,4 kN 3,0 m 17,2 kN
Boom extension	3,4 m	4,0 m	3,4 m	4,0 m
Torque moment, gross	22 kNm	22 kNm	22 kNm	22 kNm
Angle of rotation	370°	370°	370°	370°
Working pressure	23,5 Mpa	23,5 Mpa	23,5 Mpa	23,5 Mpa
Recommended flow	90–150 l/min	90–150 l/min	90–150 l/min	90–150 l/min
Weight with lowest pillar elevation <i>Excl. grapple and rotator</i>	1350 kg	1400 kg	1350 kg	1400 kg

Range 9,2 m



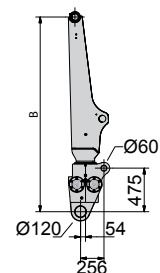
PILLAR ELEVATIONS (A)

Profile pillar:
1700 mm
1800 mm
1900 mm
2000 mm

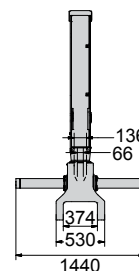
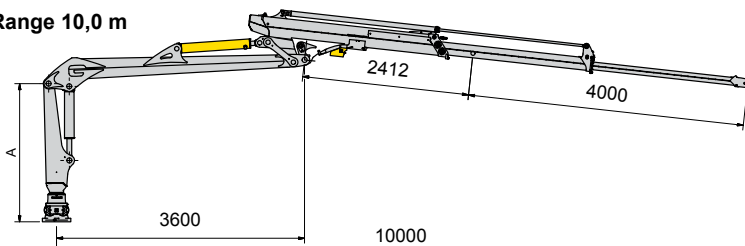


PILLAR ELEVATIONS (B)

Profile pillar:
1830 mm
1930 mm
2030 mm
2130 mm



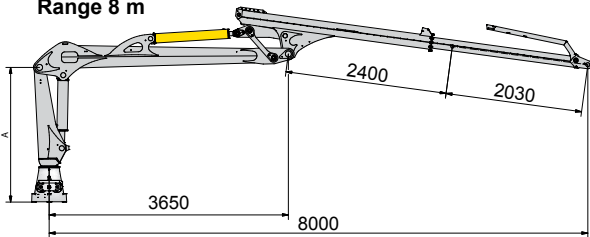
Range 10,0 m



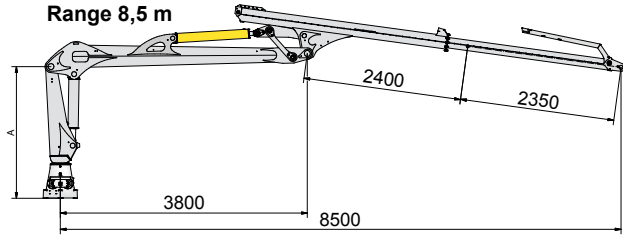
CRANAB FC10 AND FC12

MAX RANGE	FC10 – SINGLE TELE				FC12 – SINGLE TELE			
	8 m		8,5 m		8 m		8,5 m	
Lifting moment, gross	100 kNm		100 kNm		120 kNm		120 kNm	
Lifting moment at crane nose at range	8,0 m 6,0 m 3,0 m	7,2 kN 9,8 kN 21,3 kN	8,5 m 6,2 m 3,0 m	6,5 kN 9,2 kN 21 kN	8,0 m 6,0 m 3,0 m	9,7 kN 13 kN 27,5 kN	8,5 m 6,2 m 3,0 m	8,8 kN 12,3 kN 27,3 kN
Boom extension	2,0 m		2,4 m		2,0 m		2,4 m	
Torque moment, gross	28,7 kNm		28,7 kNm		28,7 kNm		28,7 kNm	
Angle of rotation	370°		370°		370°		370°	
Working pressure	23,5 Mpa		23,5 Mpa		24,5 Mpa		24,5 Mpa	
Recommended flow	120–200 l/min		120–200 l/min		130–220 l/min		130–220 l/min	
Weight with lowest pillar elevation <i>Excl. grapple and rotator</i>	1610 kg		1630 kg		1630 kg		1650 kg	

Range 8 m

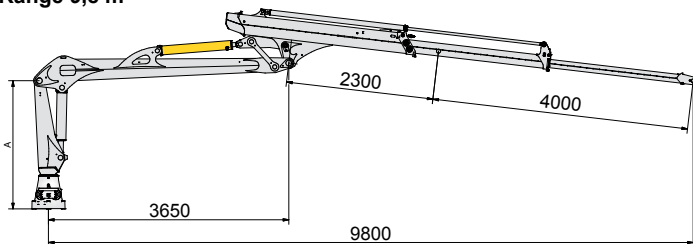


Range 8,5 m



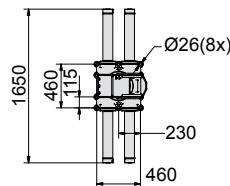
MAX RANGE	FC10 – DOUBLE TELE				FC12 – DOUBLE TELE			
	9,8 m		10,0 m		9,8 m		10,0 m	
Lifting moment, gross	100 kNm		100 kNm		120 kNm		120 kNm	
Lifting moment at crane nose at range	9,8 m 5,9 m 3,0 m	5,1 kN 8,9 kN 20,2 kN	10,0 m 6,0 m 3,0 m	4,8 kN 8,3 kN 19,8 kN	9,8 m 5,9 m 3,0 m	7,1 kN 12,2 kN 26,5 kN	10,0 m 6,1 m 3,0 m	6,7 kN 11,5 kN 26,2 kN
Boom extension	4,0 m		4,0 m		4,0 m		4,0 m	
Torque moment, gross	28,7 kNm		28,7 kNm		28,7 kNm		28,7 kNm	
Angle of rotation	370°		370°		370°		370°	
Working pressure	23,5 Mpa		23,5 Mpa		24,5 Mpa		24,5 Mpa	
Recommended flow	120–200 l/min		120–200 l/min		130–220 l/min		130–220 l/min	
Weight with lowest pillar elevation <i>Excl. grapple and rotator</i>	1735 kg		1745 kg		1755 kg		1765 kg	

Range 9,8 m



PILLAR ELEVATIONS (A)

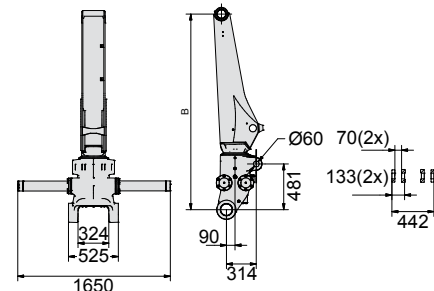
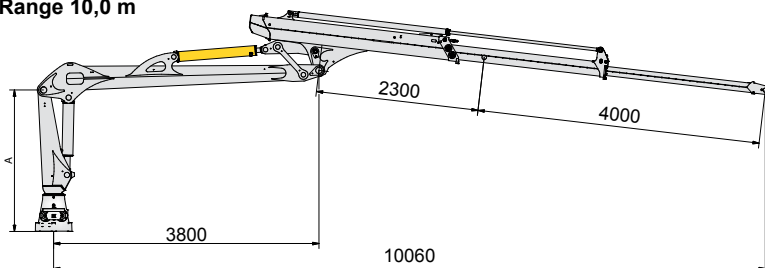
Profile pillar:
1725 mm
1900 mm
2000 mm



PILLAR ELEVATIONS (B)

Profile pillar:
1785 mm
1955 mm
2060 mm

Range 10,0 m

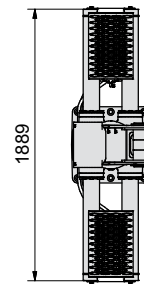
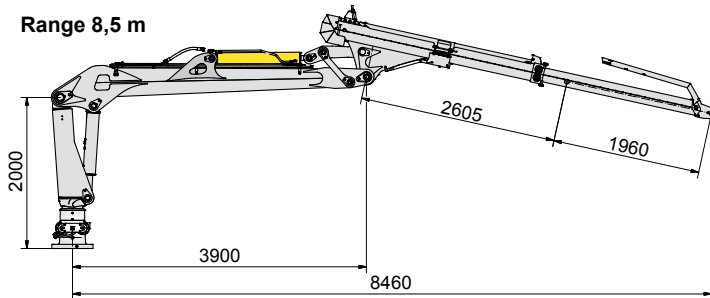


CRANAB FC16

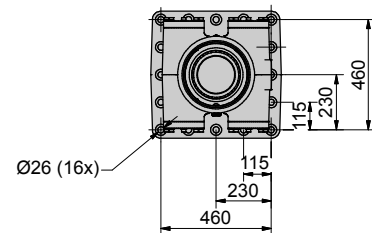
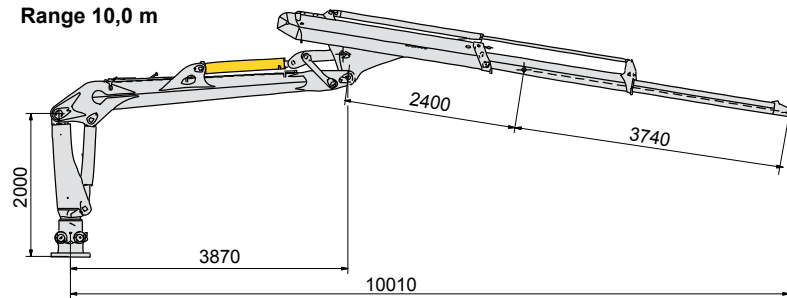
We reserve the right to make amendments.

	FC16 – SINGLE TELE	FC16 – DOUBLE TELE
MAX RANGE	8,5 m	10,0 m
Lifting moment, gross	165 kNm	165 kNm
Lifting moment at crane nose at range	8,5 m 12,8 kN 6,5 m 16,7 kN 3,0 m 36 kN	10,0 m 9,8 kN 6,6 m 16,1 kN 3,0 m 34,7 kN
Boom extension	2,0 m	3,7 m
Torque moment, gross	42,5 kNm	42,5 kNm
Angle of rotation	370°	370°
Working pressure	23,5 Mpa	23,5 Mpa
Recommended flow	180–300 l/min	180–300 l/min
Weight with lowest pillar elevation <i>Excl. grapple and rotator</i>	2200 kg	2385 kg

Range 8,5 m



Range 10,0 m





EXPERIENCE. TECHNOLOGY. INNOVATION.

Cranab's factories are situated in Vindeln, surrounded by the forests of West Bothnia. Here we develop and manufacture world-class cranes, grapples and road clearing machines. We are driven by our passion for forestry and road clearance technology. We are also driven by our unyielding goal to constantly push technology development forwards. Although we are based in northern Sweden we reach out to the whole world to be close to the customer we develop products for. We listen carefully to their requirements and draw on more than 50 years of experience and solid technological expertise to develop innovative products.

Experience, technological expertise and an unswerving determination to improve. This is a somewhat ingenious combination if you ask us.