



Powerful Synergies



COPMA

POWER AND TECHNOLOGY

ESSENTIAL \ HIGH POWER \ TOP RANGE
MODELS 2019



COPMA

POWER AND TECHNOLOGY

SUPERIOR PERFORMANCE, MAXIMUM HEAVY LIFTING POWER, EXTREME DURABILITY AND ACTIVE STABILITY POWER SYSTEMS, MAKES COPMA KNUCKLE BOOMS UNIQUE MASTERPIECES IN TRUCK LOADER CRANES

For over 50 years **COPMA** has been guided by research and experimentation in materials and engineering. It's superior quality sits in technological expertise, engineering team, and mechanical know-how constantly pushing forward the boundaries of loader cranes.

COPMA is driven by a great passion for knuckle booms, a deeper focus on details and durability while expressing the optimal weight-power ratio for all the range of its loader cranes.

With a dynamic approach and a flexible design for serving the toughest markets and the most demanding operators, **COPMA** is a competitive truck lifting equipment and a true masterpiece of power and technology.

COPMA is motivated by crossing the limits of truck lifting equipment, with a deeper focus on safety and durability while expressing the optimal weight-power ratio for all the range of its knuckle booms.

ESSENTIAL, HIGH POWER and **TOP RANGE** models have the strong capabilities and the reliability for serving operators in a variety of sectors, from construction to heavy lifting applications such as mining, railway services, utility services, energy and oil sectors. **COPMA** cranes are a powerful tool for drastically improve the lifting performance under every work environment.

COPMA describes a wide set of knuckle boom cranes from 3.5 to 350 Ton/Mt. with newly updated versions in the entire lifting range.

ESSENTIAL

THE BEST FOR ESSENTIAL LOADING AND UNLOADING OPERATIONS

COPMA ESSENTIAL models assist the load and unload of trucks and other vehicles. These essential knuckle booms for lorry vehicles have an exceptional operator friendliness and the best competitive engineering for efficiency, reliability and faster loading cycles. Engineered for a simpler design adopting a rotation with pinion and rack, articulation without linkages or only on the first arm and minimal hydraulic systems to facilitate and improve the speed of machine movements and minimize the necessity of maintenance. Completely fully hydraulic models in the NO-CE configurations, while in the CE versions they are equipped with a primary electronic assistance system ("light electronic system").

HIGH POWER

A TRUE MASTERPIECE FOR EVERY OPERATOR

COPMA HIGH POWER knuckle booms are equipped with advanced solutions as linkages in both arms, secondary arms with a negative angle, a higher number of independent hydraulic extensions and innovative stabilizing solutions and outriggers to facilitate assembly even on the newest EURO 6 vehicles.

The full range of **HIGH POWER** models has a complete electronic system for managing additional accessories such as JIB, full range of sensor technology for maximizing the reach and the lifting capacity at the highest levels in their categories. These models can carry extra functions, winch, operator's basket, and other types of equipment and accessories.

TOP RANGE

UNIQUE PERFORMANCE FOR THE TOUGHEST NEEDS

COPMA TOP RANGE knuckle booms models express the maximum lifting capacity and the loading capabilities of the heavy-duty segment.

Developing the best performance and power weight ratio, these models have all the features of **HIGH POWER** models plus full continuous rotation on the slewing bearing ring thanks to a single of the dual geared motor.

Exceptional stability in every condition with an on board computer system for real-time handling operations while improving the performance and security of the crane. Active sensors for control the vehicle's frame flatness and directly optimize the stability control together with the full possibility of radio control are representing the **TOP RANGE** technological advantage of the most performative knuckle booms.

SALES & SERVICE

A NETWORK OF TRUST FOR SUPPORT YOU ALL OVER THE WORLD

WE ENGINEER AND BUILD ALL OUR LIFTING SOLUTIONS IN CASTEL BOLOGNESE, BUT WE SELL WORLD-WIDE THROUGH A NETWORK OF DEALERS AND DISTRIBUTORS

We are a global team that originated in **Italy**, where we design, research and manufacture the entire spectrum of our products.

Our partners, dealers, sales and service agents are based in **Europe, Africa, North America, South America, Central America, Middle East, Asia**, and **Pacific Regions**.

We are local expertise of hard working conditions, heavy duty services, marine, and offshore environments with local teams able to assist and guide our operators for their best choice in their specific sector, for their specific needs as we are all part of the great team of **CPS GROUP**.

A GLOBAL PRESENCE FOR RELIABILITY, COMPETITIVITY AND LONG TERM QUALITY IN HEAVY LIFTING APPLICATIONS

CPS GROUP is an established presence in the global market, working with our operators and dealers in **Emea, Americas** and **Apac** facing diverse lifting challenges, complex operational environments with a direct approach to our customers, users, and operators for manufacturing and supplying the most flexible and tailored solutions for each specific need.

Our global presence is our field of experimentation, testing and research, integrating comprehensive know-how with highest levels of performance and the most endurance challenges for our equipment, we are a secure choice with an extensive network of sales, dealers, and service.

CONTENT OVERVIEW

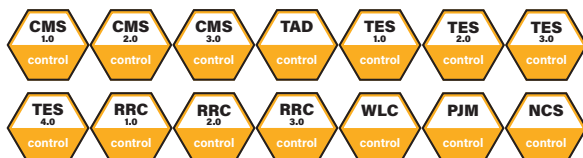
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TECHNICAL FEATURES

EASY USE



CONTROL



STRUCTURE



THESE TECHNICAL FEATURES ARE DESIGNED AND TAILORED TO EVERY CUSTOMER NEED. PROVIDING THE EASIEST USE AND OPERATOR FRIENDLY TECHNOLOGY, MORE CONTROL AND STRONGER STRUCTURAL IMPROVEMENTS TO THE KNUCKLE BOOM CRANE AS NEVER BEFORE.

Our technical features are optimized in **EASY USE**, **CONTROL**, and **STRUCTURE** for providing the best reliable and user-friendly technological features and highest grades of steel resistance for both **standard** and **optional** configurations.

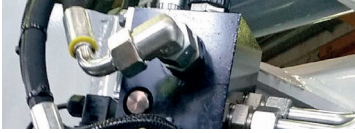
COPMA knuckle booms are built tough to perform in every working condition at the highest standards of safety, lifting capacity and operational capabilities. With superior levels of performance, safety and security thanks to advanced stability controls, **COPMA** is today at the top edge of **CPS GROUP** research and development strategy for advancing boundaries of truck lifting technology.



TECHNICAL FEATURES

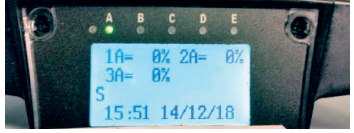
HSE High Speed Extension

Hydraulic system for reducing load losses and bottlenecks for the correct output sequence of the extensions by increasing the speed of 30%-60% thanks to the regenerative valve. Greater continuous performance thanks to lower fluid temperature.



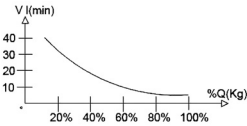
ERD Electronic Radio Display

A display on the remote control allows the operator to maintain the total control of all the crane functions in real time by managing the work mode, the stability control, and oversee any maintenance and diagnostic messages.



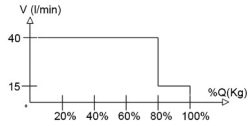
HPV High Power Velocity Electronic

A valve electronically manages the flow of oil to the distributor by increasing the load capacity of the crane and intervening on the lifting speed and allowing the reduction of dynamic effects while optimizing performance.



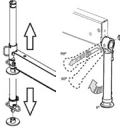
HPV High Power Velocity Hydraulic

Fully automatic hydraulic system for adjusting the crane lifting speed according to the maximum working pressure. With this system, the load capacity of the machine is optimized by reducing the dynamic structural effects.



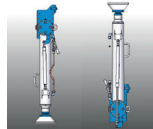
MLS Manual Lifting Stabilizers 1.0

Manual lifting of the crane legs. The manual lifting of the legs helps the operator adjust its extension manually without additional assistance from electronics or hydraulic controls.



MLS Manual Lifting Stabilizers 2.0

Manual raising of the stabilizers facilitated by a compressed gas cylinder which assists the operator during the rotation of the jack. This system assists the operator with less effort in adjusting the legs.



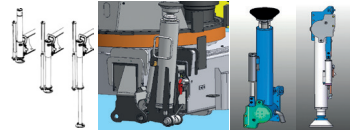
HLS Hydraulic Lifting Stabilizers 1.0

Radio control with directly flanged actuation electronics with proportional distribution. This system assists the operator with the possibility of using the radio control for stabilizing the crane and save operative time in increasing the security of the setup.



HLS Hydraulic Lifting Stabilizers 2.0

The cylinder of the stabilizer is lifted with an auxiliary jack, allowing the vertical movement within the bushes or rotating around a pin. It saves operative time in increasing the security of the setup.



CMS Crane Monitoring System 1.0

Crane stability control system TES1-TES2, with safety control and overload control for medium-small cranes. Controls the crane in 4 work areas, and each zone can have custom lifting settings depending on the vehicle stability.



CMS Crane Monitoring System 2.0

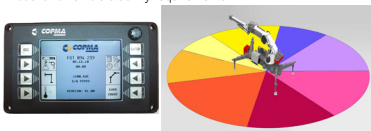
Crane stability control system TES2-TES3 with safety and overload controls and HPV lifting speed management. Active control on 4-8 working areas according to the model and vehicle stability requirements.



TECHNICAL FEATURES

CMS 3.0 Crane Monitoring System 3.0

Crane stability control system TES2-TES3, with safety and overload system, controls medium high-range crane and HPVE lifting speed management. Active control on 4-8 working areas according to the model and vehicle stability requirements.



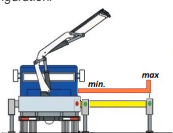
TAD Transport Alert Device

Sensors on the basement controls the correct closing of the beams, and a column switch sensor indicates the crane folded position, no more than 4 mt in height. The operator is warned with light and sound signals in the truck cabin.



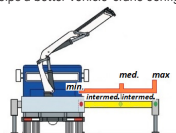
TES 1.0 Truck Electronic Stability 1.0

Active stability control for performance optimization according to the type of stabilization (1) to guarantee maximum safety in all working conditions. Mandatory in the CE market, it helps a better vehicle-crane configuration.



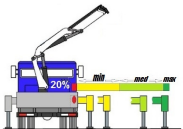
TES 2.0 Truck Electronic Stability 2.0

Active stability control for performance optimization according to the type of stabilization (2) to guarantee maximum safety in all working conditions. Mandatory in the CE market, it helps a better vehicle-crane configuration.



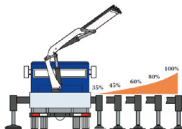
TES 3.0 Truck Electronic Stability 3.0

Active stability control for performance optimization according to the type of stabilization (3) to guarantee maximum safety in all working conditions. Mandatory in the CE market, it helps a better vehicle-crane configuration.



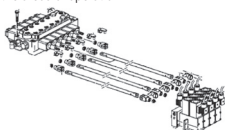
TES 4.0 Truck Electronic Stability 4.0

Active stability control for performance optimization according to the type of stabilization (4) to guarantee maximum safety in all working conditions. Mandatory in the CE market, it helps a better vehicle-crane configuration.



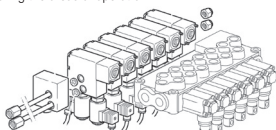
RRC 1.0 Radio Remote Control 1.0

Radio remote control with actuation electronics directly connected with the standard distribution. The remote control allows operating the crane while continually monitoring the areas of operation.



RRC 2.0 Radio Remote Control 2.0

Radio remote control with the electro-hydraulic actuator connected directly to the standard control valve. The remote control allows operating the crane while continually monitoring the areas of operation.



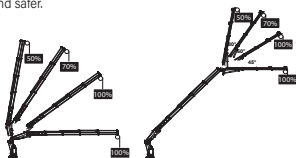
RRC 3.0 Radio Remote Control 3.0

Radio remote control with the electro-hydraulic actuator connected directly to the proportional control valve. The remote control allows operating the crane while continually monitoring the areas of operation.



WLC Winch Linear Control

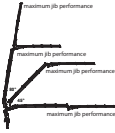
The winch linear electronic control allows pulling the rope according to the working angle of the crane and the JIB. It optimizes load control and makes every movement easier and safer.



TECHNICAL FEATURES

PJM Power Jib Monitoring

The PJM system guarantees to operate with the maximum performance in every working condition thanks to a dynamic variation of the maximum pressure according to the crane arm angles.



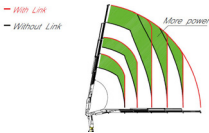
NCS Negative Control System

Slope sensors mounted on the articulated booms of the crane, combined with the electronic control, control the maximum vertical angle of the arms and the JIB preventing incorrect or dangerous movements by the operator.



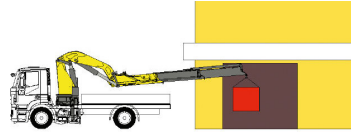
CCLS Constant Control Link System

The cranes equipped with connecting rods on the articulations, with a constant lifting moment over the entire working arc, allow to 100% optimize the crane's capacity in positions close to the maximum vertical.



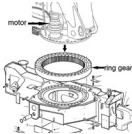
NBS Negative Boom System

The linkage on the articulation of the secondary boom permits the introduction of loads within restricted spaces. It enables the recovery of the deflection of the extension boom group due to the weight and the load raised on the extensions.



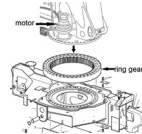
RES 1.0 Rotation Endless System

A rotating bearing and one gearbox system, the electric wires are linked between base-column with a swivel electrical-hydraulic joint. Allows operator to gain maximum power also at the slowest operational speed and having the highest precision.



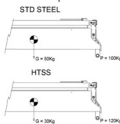
RES 2.0 Rotation Endless System

A rotating bearing and double gearbox system, with a clearance adjusting system with an eccentric shaft. It provides the perfect transmission of the rotation with the bearing, allowing better crane optimization.



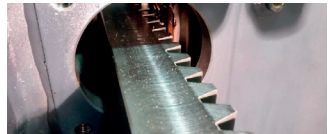
HTSS High Tensile Strength Steel

The entire high-strength steel structure thanks to an advanced FEM engineering process, develops an extraordinarily light and performing crane structure. In the perfect balance between maximum performance and operational safety.



RRP Rotation Rack Pinion

The rotation system with rack and pinion is the best optimal solution for the most performative lifting capacity. It reduces the weights and the crane dimension for the most compact configuration.



COPMA IS MOVING FORWARD THE CAPABILITIES OF TRUCK LOADER CRANES, AND KNUCKLE BOOM TECHNOLOGY WITH CUTTING EDGE RESEARCH IN THE STRONGEST MATERIALS AND THE TOP QUALITY FEATURES AVAILABLE ON THE ENTIRE RANGE OF APPLICATIONS.

ESSENTIAL MODEL 35



standard

- easy use
- control
- structure



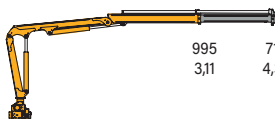
optional

- control



*E.C. market specific equipment

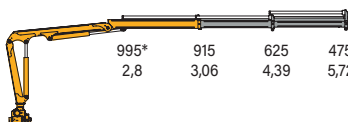
35.1



2190 1570 lbs
10'2" 14'3" ft

995 710 kg
3,11 4,34 m

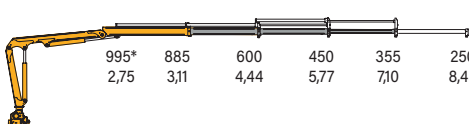
35.2



2020* 2190 1380 1050 lbs
9'2" 10" 14'5" 18'9" ft

995* 915 625 475 kg
2,8 3,06 4,39 5,72 m

35.3



2190* 1950 1320 990 780 550 lbs
9'0" 10'2" 14'7" 18'11" 23'4" 27'8" ft

995* 885 600 450 355 250 kg
2,75 3,11 4,44 5,77 7,10 8,45 m

* Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
35.1	30,36	235	10	455	400	1697	507	1576	3710
35.2	27,47	240	10	490	400	1697	507	1576	3710
35.3	27	240	10	515	400	1724	507	1576	3710



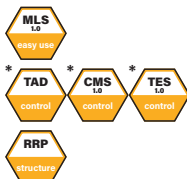
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
35.1	21959	3408	2,6	1000	400	5' 7"	1'8"	5'2"	12'2"
35.2	19869	3480	2,6	1080	400	5' 7"	1'8"	5'2"	12'2"
35.3	19529	3480	2,6	1140	400	5'8"	1'8"	5'2"	12'2"

ESSENTIAL MODEL 37



standard

- easy use
- control
- structure



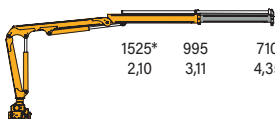
optional

- control



*E.C. market specific equipment

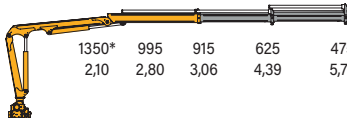
37.1



3360* 2190 1570 lbs
6'11" 10'2" 14'3" ft

1525* 995 710 kg
2,10 3,11 4,35 m

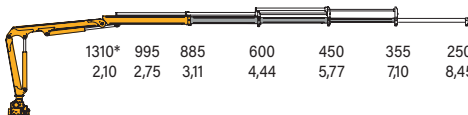
37.2



2980* 2190 2020 1380 1050 lbs
6'11" 9'2" 10'0" 14'5" 18'9" ft

1350* 995 915 625 475 kg
2,10 2,80 3,06 4,39 5,72 m

37.3



2890* 2190 2190 2060 1470 780 820 lbs
6'11" 9'0" 6'7" 11'2" 15'5" 20'4" 25'3" ft

1310* 995 885 600 450 355 250 kg
2,10 2,75 3,11 4,44 5,77 7,10 8,45 m

*Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
37.1	31,4	235	10	455	400	1697	507	1576	3710
37.2	27,8	240	10	490	400	1697	507	1576	3710
37.3	27,01	240	10	515	400	1724	507	1576	3710



	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
37.1	22771	3408	2,6	1000	400	5' 7"	1'8"	5'2"	12'2"
37.2	20188	3480	2,6	1080	400	5' 7"	1'8"	5'2"	12'2"
37.3	19531	3480	2,6	1140	400	5'8"	1'8"	5'2"	12'2"

ESSENTIAL MODEL 42



standard

- easy use
- control
- structure



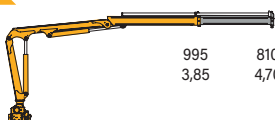
optional

- control



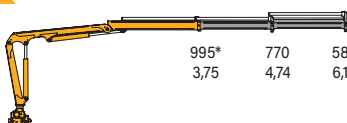
*E.C. market specific equipment

42.1



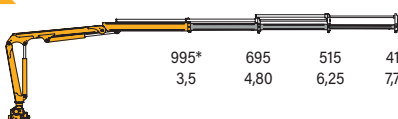
2190	1790	lbs
12'8"	15'5"	ft
995	810	kg
3,85	4,70	m

42.2



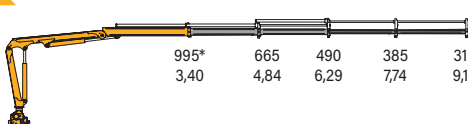
2190*	1700	1280	lbs
12'4"	15'7"	20'4"	ft
995*	770	580	kg
3,75	4,74	6,19	m

42.3



2190*	1530	1140	900	lbs
11'6"	15'9"	20'6"	25'3"	ft
995*	695	515	410	kg
3,5	4,80	6,25	7,70	m

42.4



2190*	1470	1080	850	690	lbs
11'2"	15'11"	20'8"	25'5"	30'2"	ft
995*	665	490	385	315	kg
3,40	4,84	6,29	7,74	9,19	m

*Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
42.1	37,6	290	10	512	400	1784	535	1633	4030
42.2	36,6	290	10	550	400	1784	535	1633	4030
42.3	34,2	290	10	585	400	1784	535	1633	4030
42.4	33,2	290	10	620	400	1804	535	1633	4030



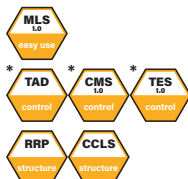
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
42.1	27196	4205	2,6	1130	400	5'8"	1'9"	5'3"	13'1"
42.2	26473	4205	2,6	1210	400	5'8"	1'9"	5'3"	13'1"
42.3	24708	4205	2,6	1290	400	5'8"	1'9"	5'3"	13'1"
42.4	23999	4205	2,6	1370	400	5'11"	1'9"	5'3"	13'1"

ESSENTIAL MODEL 44



standard

- easy use
- control
- structure



optional

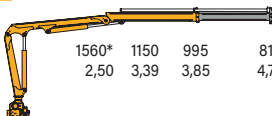
- control



*E.C. market specific equipment

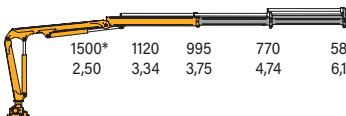
44.1

3440*	2540	2190	1790	lbs
8'2"	11'	12'8"	15'5"	ft
1560*	1150	995	810	kg
2,50	3,39	3,85	4,70	m



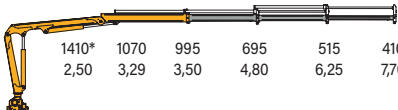
44.2

3310*	2470	2190	1700	1280	lbs
8'2"	10'11"	12'4"	15'7"	20'4"	ft
1500*	1120	995	770	580	kg
2,50	3,34	3,75	4,74	6,19	m



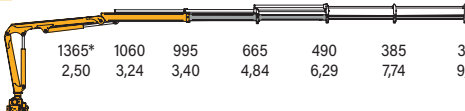
44.3

3110*	2360	2190	1530	1140	900	lbs
8'2"	10'10"	11'6"	15'9"	20'6"	25'3"	ft
1410*	1070	995	695	515	410	kg
2,50	3,29	3,50	4,80	6,25	7,70	m



44.4

3030*	2340	2190	1470	1080	850	690	lbs
8'2"	10'8"	11'2"	15'11"	20'8"	25'5"	30'2"	ft
1365*	1060	995	665	490	385	315	kg
2,50	3,24	3,40	4,84	6,29	7,74	9,19	m



* Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
44.1	38,3	290	10	512	400	1784	535	1633	4000
44.2	36,8	290	10	550	400	1784	535	1633	4000
44.3	34,6	290	10	585	400	1784	535	1633	4000
44.4	33,7	290	10	620	400	1804	535	1633	4000

	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
44.1	2770	4205	2,6	1130	400	5'8"	1'9"	5'3"	13'1"
44.2	2662	4205	2,6	1210	400	5'8"	1'9"	5'3"	13'1"
44.3	2503	4205	2,6	1290	400	5'8"	1'9"	5'3"	13'1"
44.4	2438	4205	2,6	1370	400	5'11"	1'9"	5'3"	13'1"

ESSENTIAL MODEL 60



standard

- easy use
- control
- structure



optional

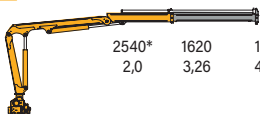
- control



*E.C. market specific equipment

60.1

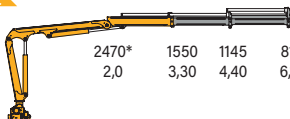
5600* 3570 2670 lbs
6'7" 10'8" 14'4" ft



2540* 1620 1210 kg
2,0 3,26 4,36 m

60.2

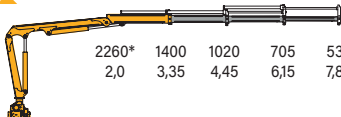
5450* 3420 2520 1800 lbs
6'7" 10'10" 14'5" 20" ft



2470* 1550 1145 815 kg
2,0 3,30 4,40 6,10 m

60.3

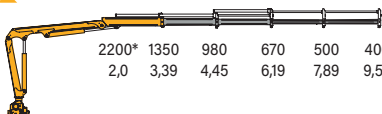
4980* 390 2250 1550 1180 lbs
13'00" 13'00" 14'7" 20'2" 25'7" ft



2260* 1400 1020 705 535 kg
2,0 3,35 4,45 6,15 7,80 m

60.4

4850* 2980 2160 1450 1100 880 lbs
6'7" 11'1" 14'7" 20'4" 25'1" 31'6" ft



2200* 1350 980 670 500 400 kg
2,0 3,39 4,45 6,19 7,89 9,59 m

*Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
60.1	52	270	20	720	400	1990	633	1908	3500/4600
60.2	50,2	270	20	790	400	1990	633	1908	3500/4600
60.3	46	270	20	845	400	1990	633	1908	3500/4600
60.4	45	270	20	890	400	1990	633	1908	3500/4600

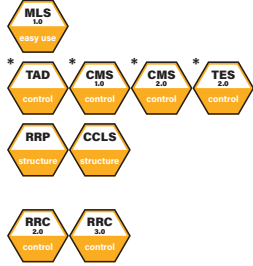
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
60.1	37467	3840	5,3	1590	400	6'6"	2'1"	6'3"	11'6"/15'1"
60.2	37467	3840	5,3	1740	400	6'6"	2'1"	6'3"	11'6"/15'1"
60.3	33272	3840	5,3	1860	400	6'6"	2'1"	6'3"	11'6"/15'1"
60.4	32549	3840	5,3	1960	400	6'6"	2'1"	6'3"	11'6"/15'1"

ESSENTIAL MODEL 78



standard

- easy use
- control
- structure

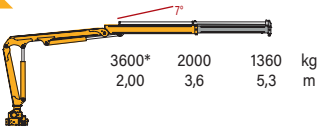


optional

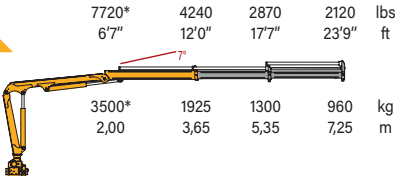
- control

*E.C. market specific equipment

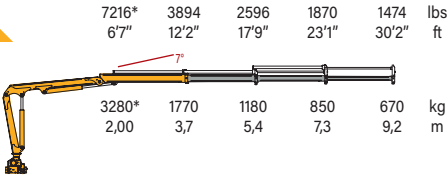
78.1



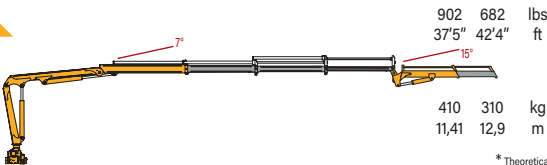
78.2



78.3



78.3J1

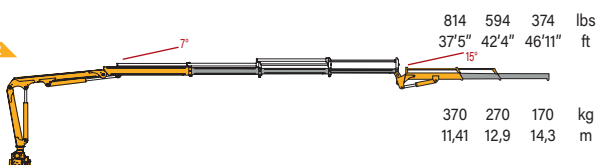


* Theoretical capacity at fixed hook

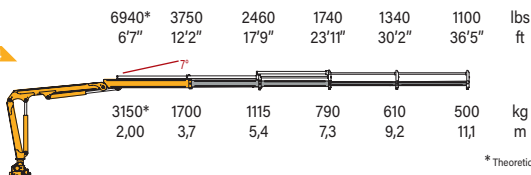
	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
78.1	70.6	300	25	800	370	2195	627	1876	4500/5150
78.2	68.9	300	25	870	370	2195	627	1876	4500/5150
78.3	64.3	300	25	930	370	2195	627	1876	4500/5150
78.3J1	64.3	300	25	1080	370	2195	733	2137	4500/5150
78.3J2	64.3	300	25	1110	370	2195	733	2137	4500/5150
78.4	61.7	300	25	890	370	2195	627	1876	4500/5150



78.3J2



78.4



* Theoretical capacity at fixed hook

	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
78.1	51065	4350	6,6	1765	400	7'2"	2'1"	6'2"	14'9"/16'11"
78.2	49855	4350	6,6	1918	400	7'2"	2'1"	6'2"	14'9"/16'11"
78.3	33272	4350	6,6	2046	400	7'2"	2'1"	6'2"	14'9"/16'11"
78.3J1	33272	4350	6,6	2380	400	7'2"	2'5"	7'0"	14'9"/16'11"
78.3J2	33272	4350	6,6	2445	400	7'2"	2'5"	7'0"	14'9"/16'11"
78.4	32549	4350	6,6	2200	400	6'6"	2'1"	6'3"	14'9"/16'11"

ESSENTIAL MODEL 80



standard

- control
- structure



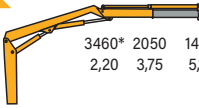
optional

- control



*E.C. market specific equipment

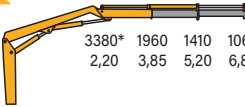
80.1



7630* 4520 3280 lbs
7'3" 12'4" 16'11" ft

3460* 2050 1490 kg
2,20 3,75 5,15 m

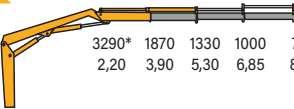
80.2



7450* 4320 3110 2350 lbs
7'3" 12'8" 17'1" 22'4" ft

3380* 1960 1410 1065 kg
2,20 3,85 5,20 6,80 m

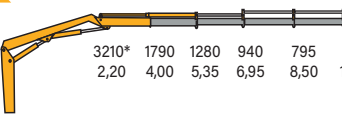
80.3



7250* 4120 2930 2200 1750 lbs
7'3" 12'10" 17'5" 22'6" 27'9" ft

3290* 1870 1330 1000 795 kg
2,20 3,90 5,30 6,85 8,45 m

80.4



7080* 3950 2820 2070 1753 1300 lbs
7'3" 13'1" 17'7" 22'10" 27'11" 33'4" ft

3210* 1790 1280 940 795 590 kg
2,20 4,00 5,35 6,95 8,50 10,15 m

*Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
80L.1	71,04	270	25	1040	370	2270	701	2079	3256/4426
80L.2	69,7	270	25	1110	370	2270	701	2079	3256/4426
80L.3	68,46	270	25	1170	370	2278	701	2079	3256/4426
80L.4	65,45	270	25	1220	370	2283	701	2079	3256/4426



	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
80L.1	51383	3915	6,6	2290	370	7'5"	2'4"	6'10"	10'8" / 14'6"
80L.2	50413	3915	6,6	2450	370	7'5"	2'4"	6'10"	10'8" / 14'6"
80L.3	49516	3915	6,6	2580	370	7'6"	2'4"	6'10"	10'8" / 14'6"
80L.4	47339	3915	6,6	2690	370	7'6"	2'4"	6'10"	10'8" / 14'6"

ESSENTIAL MODEL 108



standard

- control
- structure



optional

- control
- easy use



*E.C. market specific equipment

108.1

10580* 5140 3480 lbs
6'7" 13'5" 19'4" ft



4800* 2330 1580 kg
2,00 4,10 5,90 m

108.2

10140* 4890 3330 2490 lbs
6'7" 13'7" 19'6" 25'11" ft



4600* 2220 1510 1130 kg
2,00 4,15 5,95 7,90 m

108.3

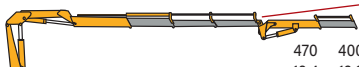
9810* 4720 3190 2340 1830 lbs
6'7" 13'5" 19'4" 25'11" 32'9" ft



4450* 2140 1445 1060 830 kg
2,0 4,15 5,95 7,90 10,00 m










108.3J1

1034 880 lbs
40'8" 45'3" ft



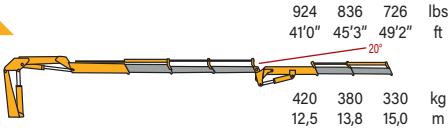
470 400 kg
12,4 13,8 m

*Theoretical capacity at fixed hook

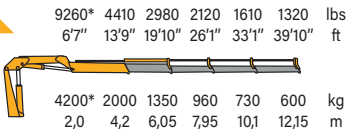
									
	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
108.1	93.7	280	25	1000	400	2323	737	2106	4350/5200
108.2	90.4	280	25	1100	400	2323	737	2106	4350/5200
108.3	87.1	280	25	1190	400	2323	737	2106	4350/5200
108.3J1	87.1	280	25	1310	400	2323	852	2350	4350/5200
108.3J2	87.1	280	25	1350	400	2323	852	2350	4350/5200
108.4	61.7	280	25	1260	400	2323	737	2106	4350/5200



108.3J2



108.4



* Theoretical capacity at fixed hook

	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
108.1	69109	4060	6,6	2205	400	7'7"	2'1"	6'1"	14'9"/16'11"
108.2	66675	4350	6,6	2425	400	7'7"	2'1"	6'1"	14'9"/16'11"
108.3	64242	4350	6,6	2620	400	7'7"	2'1"	6'1"	14'9"/16'11"
108.3J1	64242	4350	6,6	2890	400	7'7"	2'9"	7'9"	14'9"/16'11"
108.3J2	64242	4350	6,6	2975	400	7'7"	2'9"	7'9"	14'9"/16'11"
108.4	32549	4350	6,6	2775	400	7'7"	2'1"	6'1"	14'9"/16'11"

ESSENTIAL MODEL 128



standard

- control
- structure



optional

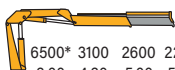
- control
- easy use



*E.C. market specific equipment

128.1

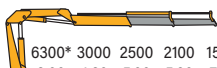
14330* 6830 5730 4850 lbs
6'7" 13'9" 16'5" 19'4" ft



6500* 3100 2600 2200 kg
2,00 4,20 5,00 5,90 m

128.2

13890* 6610 5510 4630 3440 lbs
6'7" 13'9" 16'5" 19'4" 25'3" ft



6300* 3000 2500 2100 1560 kg
2,00 4,20 5,00 5,90 7,70 m

128.3

11570* 5440 3670 2720 2170 lbs
6'7" 13'11" 19'8" 25'7" 31'10" ft



5250* 2466 1665 1235 985 kg
2,00 4,25 6,00 7,80 9,70 m

128.4

11130* 5250 3480 2540 1980 1610 lbs
6'7" 13'11" 19'8" 25'7" 31'1" 38'9" ft



5050* 2380 1580 1150 900 730 kg
2,00 4,25 6,0 7,80 9,70 11,80 m

*Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
128.1	128	310	30	1330	400	2360	821	2202	4200/5200
128.2	123	310	30	1420	400	2360	821	2202	4200/5200
128.3	102	290	30	1526	400	2360	821	2202	4200/5200
128.4	99,3	290	30	1623	400	2360	821	2202	4200/5200
128.5	97	290	30	1700	400	2362	821	2202	4200/5200
128.6	94,3	290	30	1781	400	2412	830	2202	4200/5200



128.5

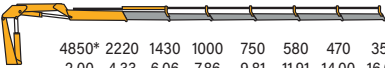
10910* 5070 3310 2360 1810 1430 1210 lbs
6'7" 14'1" 19'8" 25'7" 32'0" 38'9" 45'7" ft



4950* 2300 1500 1070 820 650 550 kg
2,00 4,30 6,00 7,80 9,75 11,80 13,90 m

128.6

10690* 4890 3150 2200 1650 1280 1040 770 lbs
6'7" 14'2" 19'11" 25'9" 32'2" 39'1" 45'11" 52'6" ft



4850* 2220 1430 1000 750 580 470 350 kg
2,00 4,33 6,06 7,86 9,81 11,91 14,00 16,00 m

* Theoretical capacity at fixed hook



	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
128.1	92400	4495	7.9	2930	400	7'9"	2'8"	7'3"	13'9"/17'2"
128.2	89000	4495	7.9	3100	400	7'9"	2'8"	7'3"	13'9"/17'2"
128.3	74365	4205	7.9	3327	400	7'9"	2'8"	7'3"	13'9"/17'2"
128.4	71824	4205	7.9	3538	400	7'9"	2'8"	7'3"	13'9"/17'2"
128.5	70160	4205	7.9	3740	400	7'9"	2'8"	7'3"	13'9"/17'2"
128.6	68207	4205v	7.9	3882	400	7'11"	2'9"	7'3"	13'9"/17'2"

HIGH POWER MODEL 130A



standard

- control
- structure



optional

- control
- easy use



*E.C. market specific equipment

130A.1

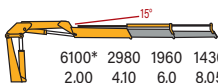
15551* 7210 4410 lbs
6'6" 13'3" 19'6" ft



6600* 3270 2000 kg
2,00 4,05 5,95 m

130A.2

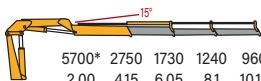
13448* 6570 4320 3153 lbs
6'6" 13'45" 19'7" 26'5" ft



6100* 2980 1960 1430 kg
2,00 4,10 6,0 8,05 m

130A.3

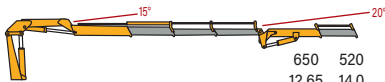
12566* 6063 3814 2734 2117 lbs
6'6" 13'7" 19'9" 26'6" 33'3" ft



5700* 2750 1730 1240 960 kg
2,00 4,15 6,05 8,1 10,15 m

130A.3J1

1430 1145 lbs
41'6" 45'11" ft



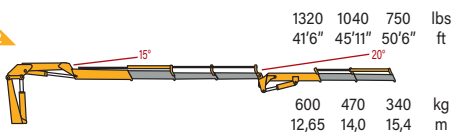
650 520 kg
12,65 14,0 m

*Theoretical capacity at fixed hook

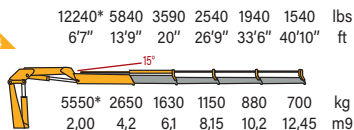


	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
130A.1	130	280	40	1520	400	2472	792	2185	4600/5600
130A.2	120	280	40	1630	400	2472	792	2185	4600/5600
130A.3	112	305	40	1730	400	2468	850	2185	4600/5600
130A.3J1	112	305	40	1950	400	2470	979	2437	4600/5600
130A.3J2	112	305	40	1990	400	2470	979	2437	4600/5600
130A.4	109	305	40	1830	400	2468	850	2185	4600/5600
130A.4J1	109	305	40	2070	400	2470	979	2437	4600/5600
130A.4J2	109	305	40	2105	400	2470	979	2437	4600/5600
130A.5	105	305	40	1920	400	2468	850	2185	4600/5600
130A.6	101	305	40	2000	400	2468	850	2185	4600/5600

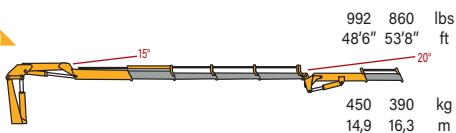
130A.3J2



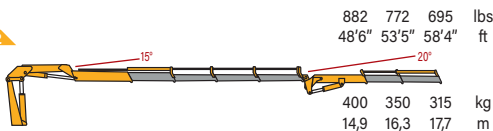
130A.4



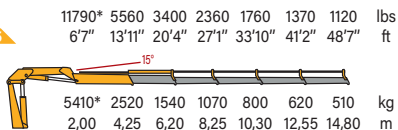
130A.4J1



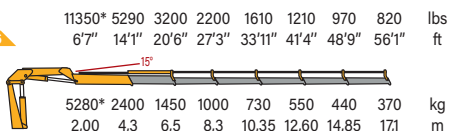
130A.4J2



130A.5



130A.6



* Theoretical capacity at fixed hook



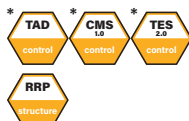
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
130A.1	94030	4060	10.5	3350	400	8'1"	2'7"	7'2"	15' 1"/18'4"
130A.2	88507	4060	10.5	3590	400	8'1"	2'7"	7'2"	15' 1"/18'4"
130A.3	81009	4423	10.5	3810	400	8'1"	2'9"	3'3"	15' 1"/18'4"
130A.3J1	81009	4423	10.5	4300	400	7'12"	3'3"	8'0"	15'1"/18'4"
130A.3J2	81009	4423	10.5	4390	400	7'12"	3'3"	8'0"	15'1"/18'4"
130A.4	80394	4423	10.5	4030	400	7'12"	2'9"	7'2"	15' 1"/18'4"
130A.4J1	80394	4423	10.5	4340	400	7'12"	3'3"	8'0"	15'1"/18'4"
130A.4J2	80394	4423	10.5	4430	400	7'12"	3'3"	8'0"	15'1"/18'4"
130A.5	77444	4423	10.5	4230	400	7'12"	2'9"	7'2"	15' 1"/18'4"
130A.6	73219	4423	10.5	4410	400	7'12"	2'9"	7'3"	15' 1"/18'4"

ESSENTIAL MODEL 140



standard

- control
- structure



optional

- control
- easy use



*E.C. market specific equipment

140.1

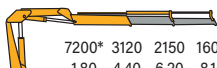
15870* 7144 5000 lbs
5'11" 14'3" 20'2" ft



7200* 3240 2270 kg
1,80 4,35 6,15 m

140.2

15430* 6880 4740 3530 lbs
5'11" 14'5" 20'4" 26'7" ft



7200* 3120 2150 1600 kg
1,80 4,40 6,20 8,15 m

140.3

14990* 6530 4450 3260 2430 lbs
5'11" 14'9" 20'8" 27'1" 33'10" ft



6800* 2960 2020 1480 1100 kg
1,80 4,50 6,30 8,25 10,30 m

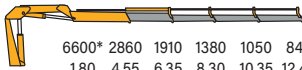
*Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
140.1	136	300	40	1700	395	2486	831	2228	4555/5437
140.2	133	300	40	1825	395	2486	831	2228	4555/5437
140.3	134	300	40	1750	395	2486	831	2228	4555/5437
140.4	130	300	40	2125	395	2486	834	2228	4555/5437
140.5	126	300	40	2235	395	2486	920	2228	4555/5437



140.4

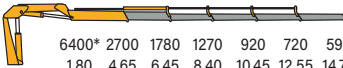
14550* 6305 4210 3040 2315 1850 lbs
5'11" 14'11" 20'10" 27'3" 33'11" 40'10" ft



6600* 2860 1910 1380 1050 840 kg
1,80 4,55 6,35 8,30 10,35 12,45 m

140.5

14110* 5950 3925 2800 2025 1585 1300 lbs
5'11" 15'3" 21'2" 27'7" 34'3" 41'2" 48'3" ft



6400* 2700 1780 1270 920 720 590 kg
1,80 4,65 6,45 8,40 10,45 12,55 14,70 m

*Theoretical capacity at fixed hook

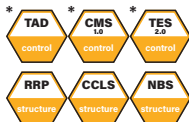
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
140.1	98657	4349	10,5	3740	395	8'2"	2'9"	7'4"	14'11"/17'10"
140.2	96234	4349	10,5	4015	395	8'2"	2'9"	7'4"	14'11"/17'10"
140.3	96342	4349	10,5	3850	395	8'2"	2'9"	7'4"	14'11"/17'10"
140.4	94122	4349	10,5	4675	395	8'2"	2'9"	7'4"	14'11"/17'10"
140.5	90809	4349	10,5	4917	395	8'2"	3'0"	7'4"	14'11"/17'10"

ESSENTIAL MODEL 158



standard

- control
- structure



optional

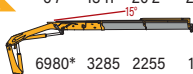
- control
- easy use



*E.C. market specific equipment

158.2

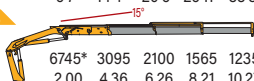
15390* 7240 4970 3770 lbs
6'7" 13'11" 20'2" 26'7" ft



6980* 3285 2255 1710 kg
2,00 4,25 6,15 8,10 m

158.3

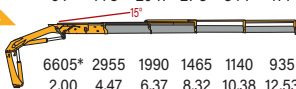
14870* 6820 4630 3450 2720 lbs
6'7" 14'4" 20'6" 26'11" 33'8" ft



6745* 3095 2100 1565 1235 kg
2,00 4,36 6,26 8,21 10,27 m

158.4

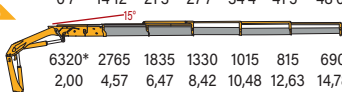
14560* 6510 4390 3230 2510 2060 lbs
6'7" 14'8" 20'11" 27'3" 34'1" 41'1" ft



6605* 2955 1990 1465 1140 935 kg
2,00 4,47 6,37 8,32 10,38 12,53 m

158.5

13930* 6096 4045 2932 2238 1797 1521 lbs
6'7" 14'12" 21'3" 27'7" 34'4" 41'5" 48'6" ft



6320* 2765 1835 1330 1015 815 690 kg
2,00 4,57 6,47 8,42 10,48 12,63 14,78 m

* Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
158.2	137	305	40	1800	420	2500	880	2270	4600/5270/6500
158.3	132,5	305	40	1920	420	2500	880	2270	4600/5270/6500
158.4	129,7	305	40	2030	420	2500	910	2270	4600/5270/6500
158.5	123,9	305	40	2135	420	2500	970	2270	4600/5270/6500

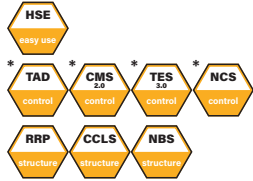
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
158.2	101011	4423	10,57	3968	420	8'2"	2'10"	7'5"	15'1"-17'3"-21'3"
158.3	97693	4423	10,57	4232	420	8'2"	2'12"	7'5"	15'1"-17'3"-21'3"
158.4	95629	4423	10,57	4784	420	8'2"	3'	7'5"	15'1"-17'3"-21'3"
158.5	91352	4423	10,57	4706	420	8'2"	3'2"	7'5"	15'1"-17'3"-21'3"

HIGH POWER MODEL 168



standard

- easy use
- control
- structure



optional

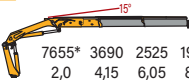
- control
- easy use



*E.C. market specific equipment

168.2

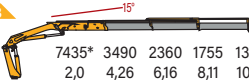
16880* 8130 5570 4210 lbs
6'7" 13'7" 19'10" 26'3" ft



7655* 3690 2525 1910 kg
2,0 4,15 6,05 8,0 m

168.3

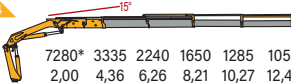
16391* 7690 5200 3870 3060 lbs
6'7" 13'12" 20'2" 26'7" 33'4" ft



7435* 3490 2360 1755 1390 kg
2,0 4,26 6,16 8,11 10,17 m

168.4

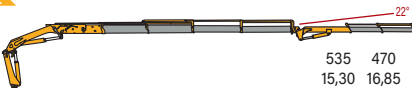
16050* 7360 4950 3650 2840 2340 lbs
6'7" 14'4" 20'6" 26'11" 33'8" 40'9" ft



7280* 3335 2240 1650 1285 1055 kg
2,00 4,36 6,26 8,21 10,27 12,42 m

168.4J2

1180 1040 940 lbs
50'2" 55'3" 60'8" ft

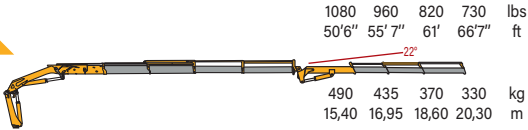


535 470 425 kg
15,30 16,85 18,50 m

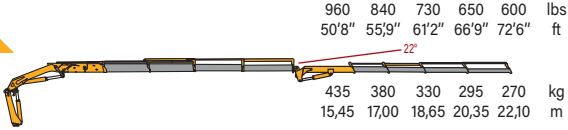
* Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
168.2	150	300	40	1935	420	2500	880	2275	4600/5270/6500
168.3	146	300	40	2055	420	2500	880	2275	4600/5270/6500
168.4	143	300	40	2170	420	2500	915	2275	4600/5270/6500
168.4J2	143	300	40	2525	420	2500	1060	2640	4600/5270/6500
168.4j3	143	300	40	2590	420	2500	1060	2640	4600/5270/6500
168.4j4	143	300	40	2630	420	2500	1060	2640	4600/5270/6500
168.5	139,4	2500	40	2280	420	2500	980	2275	4600/5270/6500
168.5J2	139,4	300	40	2530	420	2500	1060	2550	4600/5270/6500
168.6	136.4	300	40	2380	420	2500	996	2275	4600/5270/6500
168.7	130.6	300	40	2470	420	2500	996	2310	4600/5270/6500

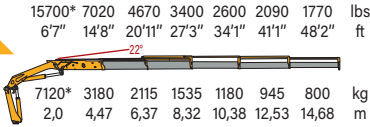
168.4J3



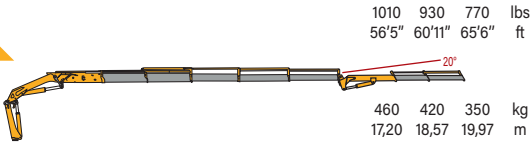
168.4J4



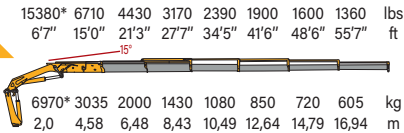
168.5



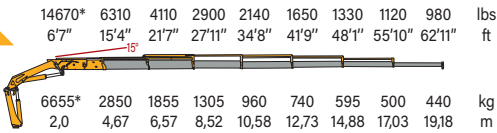
168.5J2



168.6



168.7



*Theoretical capacity at fixed hook

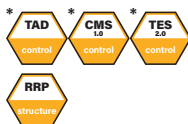
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
168.2	110596	4351	10,57	3968	420	8'2"	2'12"	7'6"	15'1"-17'3"-21'3"
168.3	107426	4351	10,57	4530	420	8'2"	2'12"	7'6"	15'1"-17'3"-21'3"
168.4	105214	4351	10,57	4784	420	8'2"	3'	7'6"	15'1"-17'3"-21'3"
168.4J2	105214	4351	10,57	5570	420	8'2"	3'6"	8'8"	15'1"-17'3"-21'3"
168.4J3	105214	4351	10,57	5710	420	8'2"	3'6"	8'8"	15'1"-17'3"-21'3"
168.4J4	105214	4351	10,57	5800	420	8'2"	3'6"	8'8"	15'1"-17'3"-21'3"
168.5	102816	4351	10,57	5300	420	8'2"	3'3"	7'6"	15'1"-17'3"-21'3"
168.5J2	102816	4351	10,57	5580	420	8'2"	3'6"	8'7'4"	15'1"-17'3"-21'3"
168.6	100569	4351	10,57	5247	420	8'2"	3'3"	7'6"	15'1"-17'3"-21'3"
168.7	96292	4351	10,57	5445	420	8'2"	3'3"	7'7"	15'1"-17'3"-21'3"

ESSENTIAL MODEL 170



standard

- control
- structure



optional

- control
- easy use



*E.C. market specific equipment

170.1

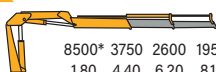
19180* 8530 6000 lbs
5'11" 14'3" 20'2" ft



8700* 3870 2720 kg
1,80 4,35 6,15 m

170.2

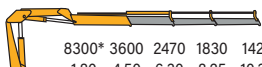
18740* 8270 5730 4300 lbs
5'11" 14'5" 20'4" 26'9" ft



8500* 3750 2600 1950 kg
1,80 4,40 6,20 8,15 m

170.3

18300* 7940 5450 4030 3130 lbs
5'11" 14'9" 20'8" 27'1" 33'10" ft



8300* 3600 2470 1830 1420 kg
1,80 4,50 6,30 8,25 10,30 m

* Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
170.1	168	300	40	1785	395	2486	831	2228	4555/5437
170.2	165	300	40	1985	395	2486	831	2228	4555/5437
170.3	162	300	40	2120	395	2486	834	2228	4555/5437
170.4	157	300	40	2250	395	2486	834	2228	4555/5437
170.5	153	300	40	2370	395	2486	920	2228	4555/5437



170.4

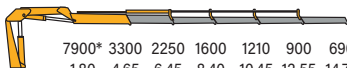
17855* 7630 5180 3810 2910 2230 lbs
5'11" 14'11" 20'10" 27'3" 33'11" 40'10" ft



8100* 3460 2350 1730 1320 1010 kg
1,80 4,65 6,45 8,30 10,35 12,45 m

170.5

17415* 7280 4960 3530 2670 1980 1520 lbs
5'11" 15'3" 21'2" 27'7" 34'3" 41'2" 48'3" ft



7900* 3300 2250 1600 1210 900 690 kg
1,80 4,65 6,45 8,40 10,45 12,55 14,70 m

* Theoretical capacity at fixed hook



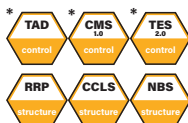
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
170.1	121730	4349	10,5	3935	395	8'2"	2'9"	7'4"	14'11"/17'10"
170.2	119343	4349	10,5	4367	395	8'2"	2'9"	7'4"	14'11"/17'10"
170.3	117173	4349	10,5	4664	395	8'2"	2'9"	7'4"	14'11"/17'10"
170.4	113868	4349	10,5	4950	395	8'2"	2'9"	7'4"	14'11"/17'10"
170.5	110989	4349	10,5	5214	395	8'2"	3'0"	7'4"	14'11"/17'10"

ESSENTIAL MODEL 178



standard

- control
- structure



optional

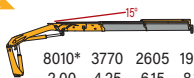
- control
- easy use



*E.C. market specific equipment

178.2

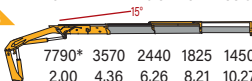
17660* 8310 5740 4370 lbs
6'7" 13'11" 20'2" 26'7" ft



8010* 3770 2605 1980 kg
2,00 4,25 6,15 8,10 m

178.3

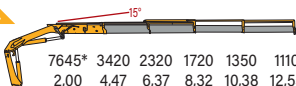
17170* 7870 5380 4020 3200 lbs
6'7" 14'4" 20'6" 26'11" 33'8" ft



7790* 3570 2440 1825 1450 kg
2,00 4,36 6,26 8,21 10,27 m

178.4

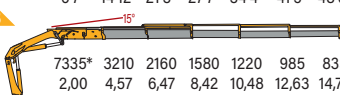
16850* 7540 5110 3790 2980 2450 lbs
6'7" 14'8" 20'11" 27'3" 34'1" 41'1" ft



7645* 3420 2320 1720 1350 1110 kg
2,00 4,47 6,37 8,32 10,38 12,53 m

178.5

16170* 7080 4760 3480 2690 2170 1840 lbs
6'7" 14'12" 21'3" 27'7" 34'4" 41'5" 48'6" ft



7335* 3210 2160 1580 1220 985 835 kg
2,00 4,57 6,47 8,42 10,48 12,63 14,78 m

*Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
178.2	157,3	300	40	1880	420	2500	880	2270	4600/5270/6500
178.3	152,9	300	40	2000	420	2500	880	2270	4600/5270/6500
178.4	150	300	40	2110	420	2500	910	2270	4600/5270/6500
178.5	143,9	300	40	2215	420	2500	970	2270	4600/5270/6500

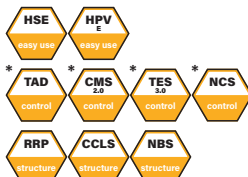
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
178.2	115978	4641	13,21	4144	420	8'2"	2'10"	7'5"	15'1"-17'3"-21'3"
178.3	112734	4641	13,21	4409	420	8'2"	2'10"	7'5"	15'1"-17'3"-21'3"
178.4	110596	4641	13,21	4651	420	8'2"	3'	7'5"	15'1"-17'3"-21'3"
178.5	106098	4641	13,21	4883	420	8'2"	3'2"	7'5"	15'1"-17'3"-21'3"

HIGH POWER MODEL 188



standard

- easy use
- control
- structure



optional

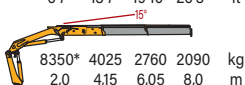
- control
- easy use



*E.C. market specific equipment

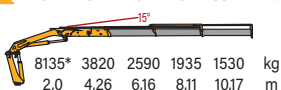
188.2

18410* 8870 6085 4608 lbs
6'7" 13'7" 19'10" 26'3" ft



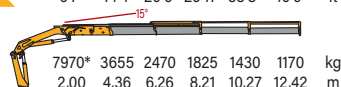
188.3

17930* 8420 5710 4270 3370 lbs
6'7" 13'12" 20'2" 26'7" 33'4" ft



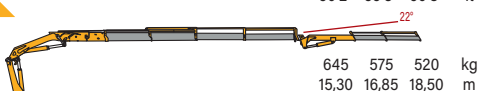
188.4

17570* 8060 5450 4020 3150 2580 lbs
6'7" 14'4" 20'6" 26'11" 33'8" 40'9" ft



188.4J2

1420 1270 1150 lbs
50'2" 55'3" 60'8" ft



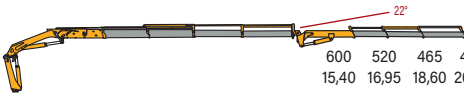
*Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
188.2	163,9	325	60	1935	420	2500	880	2275	4600/5270/6500
188.3	159.5	325	60	2055	420	2500	880	2275	4600/5270/6500
188.4	156.6	325	60	2170	420	2500	915	2286	4600/5270/6500
188.4J2	156.6	325	60	2530	420	2500	1060	2640	4600/5270/6500
188.4J3	156.6	325	60	2595	420	2500	1060	2640	4600/5270/6500
188.4J4	156.6	325	60	2635	420	2500	1060	2640	4600/5270/6500
188.5	153.3	325	60	2280	420	2500	980	2275	4600/5270/6500
188.5J2	153.3	325	60	2535	420	2500	1060	2550	4600/5270/6500
188.6	150.9	325	60	2380	420	2500	1010	2275	4600/5270/6500
188.7	144.5	325	60	2470	420	2500	1010	2310	4600/5270/6500

188.4J3

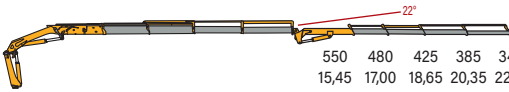
1320 1150 1030 930 lbs
50'6" 55'7" 61' 66'7" ft



600 520 465 420 kg
15,40 16,95 18,60 20,30 m

188.4J4

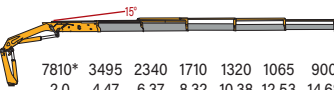
1210 1060 940 850 760 lbs
50'8" 55'9" 61'2" 66'9" 72'6" ft



550 480 425 385 345 kg
15,45 17,00 18,65 20,35 22,10 m

188.5

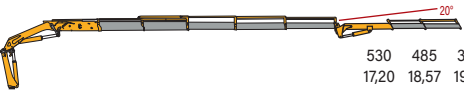
17220* 7220 5160 3770 2910 2350 1980 lbs
6'7" 14'8" 20'11" 27'3" 34'1" 41'1" 48'2" ft



7810* 3495 2340 1710 1320 1065 900 kg
2,0 4,47 6,37 8,32 10,38 12,53 14,68 m

188.5J2

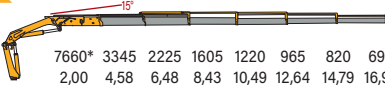
1170 1070 770 lbs
56'5" 60'11" 65'6" ft



530 485 350 kg
17,20 18,57 19,97 m

188.6

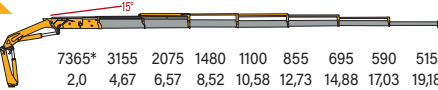
16890* 7380 4900 3540 2690 2130 1810 1530 lbs
6'7" 15'1" 21'3" 27'8" 34'5" 41'6" 48'6" 55'7" ft



7660* 3345 2225 1605 1220 965 820 695 kg
2,00 4,58 6,48 8,43 10,49 12,64 14,79 16,94 m








188.7

16240* 6960 4570 3260 2430 1880 1530 1300 1140 lbs
6'7" 15'4" 21'7" 27'11" 34'8" 41'9" 48'1" 55'10" 62'11" ft



7365* 3155 2075 1480 1100 855 695 590 515 kg
2,0 4,67 6,57 8,52 10,58 12,73 14,88 17,03 19,18 m

* Theoretical capacity at fixed hook

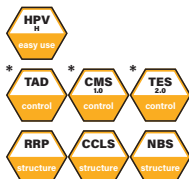
									
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
188.2	120845	4713	15,85	3968	420	8'2"	2'12"	7'6"	15'1"-17'3"-21'3"
188.3	117600	4713	15,85	4530	420	8'2"	2'12"	7'6"	15'1"-17'3"-21'3"
188.4	115462	4713	15,85	4784	420	8'2"	3'0"	7'6"	15'1"-17'3"-21'3"
184.4J2	115462	4713	15,85	5580	420	8'2"	3'6"	8'8"	15'1"-17'3"-21'3"
184.4J3	115462	4713	15,85	5720	420	8'2"	3'6"	8'8"	15'1"-17'3"-21'3"
184.4J4	115462	4713	15,85	5810	420	8'2"	3'6"	8'8"	15'1"-17'3"-21'3"
188.5	113030	4713	15,85	5030	420	8'2"	3'3"	7'6"	15'1"-17'3"-21'3"
188.5J2	113030	4713	15,85	5590	420	8'2"	3'3"	7'6"	15'1"-17'3"-21'3"
188.6	111260	4713	15,85	5250	420	8'2"	3'4"	7'6"	15'1"-17'3"-21'3"
188.7	106541	4713	15,85	5445	420	8'2"	3'4"	7'7"	15'1"-17'3"-21'3"

ESSENTIAL MODEL 198



standard

- easy use
- control
- structure



optional

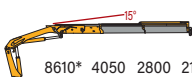
- control
- easy use



*E.C. market specific equipment

198.2

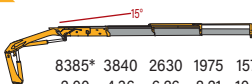
18980* 8930 6170 4700 lbs
6'7" 13'11" 20'2" 26'7" ft



8610* 4050 2800 2130 kg
2,00 4,25 6,15 8,10 m

198.3

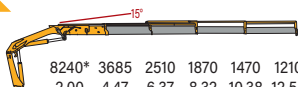
18490* 8470 5800 4350 3460 lbs
6'7" 14'4" 20'6" 26'11" 33'8" ft



8385* 3840 2630 1975 1570 kg
2,00 4,36 6,26 8,21 10,27 m

198.4

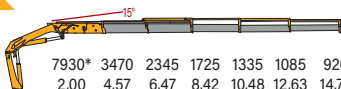
18170* 8120 5530 4120 3240 2670 lbs
6'7" 14'8" 20'11" 27'3" 34'1" 41'1" ft



8240* 3685 2510 1870 1470 1210 kg
2,00 4,47 6,37 8,32 10,38 12,53 m

198.5

17480* 7650 5170 3800 2940 2390 2030 lbs
6'7" 14'12" 21'3" 27'7" 34'4" 41'5" 48'6" ft



7930* 3470 2345 1725 1335 1085 920 kg
2,00 4,57 6,47 8,42 10,48 12,63 14,78 m

*Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
198.2	169	320	50	1880	420	2500	880	2270	4600/5270/6500
198.3	164,5	320	50	2000	420	2500	880	2270	4600/5270/6500
198.4	161,7	320	50	2110	420	2500	910	2270	4600/5270/6500
198.5	155,6	320	50	2215	420	2500	970	2270	4600/5270/6500

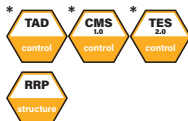
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
198.2	124752	4641	13,21	4144	420	8'2"	2'10"	7'5"	15'1"-17'3"-21'3"
198.3	121287	4641	13,21	4409	420	8'2"	2'10"	7'5"	15'1"-17'3"-21'3"
198.4	119222	4641	13,21	4651	420	8'2"	3'	7'5"	15'1"-17'3"-21'3"
198.5	114725	4641	13,21	4883	420	8'2"	3'2"	7'5"	15'1"-17'3"-21'3"

ESSENTIAL MODEL 200



standard

- control
- structure



optional

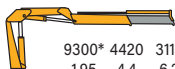
- control
- easy use



*E.C. market specific equipment

200.1

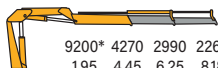
20500* 9740 6870 lbs
6'5" 14'5" 20'4" ft



9300* 4420 3115 kg
1,95 4,4 6,2 m

200.2

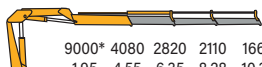
20280* 9410 6590 4980 lbs
6'5" 14'7" 20'6" 26'10" ft



9200* 4270 2990 2260 kg
1,95 4,45 6,25 8,18 m

200.3

19840* 8990 6220 4650 3660 lbs
6'5" 14'11" 20'10" 27'2" 33'10" ft



9000* 4080 2820 2110 1660 kg
1,95 4,55 6,35 8,28 10,32 m

200.4

19290* 8650 5870 4340 3350 2680 lbs
6'5" 15'1" 21'0" 27'4" 34'0" 40'11" ft



8750* 3925 2670 1970 1520 1215 kg
1,95 4,6 6,4 8,33 10,36 12,47 m

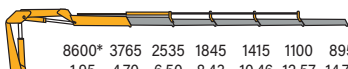
* Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
200.1	191	300	40	1960	395	2486	831	2228	4555/5437
200.2	186,5	300	40	2090	395	2486	831	2228	4555/5437
200.3	182	300	40	2220	395	2486	834	2228	4555/5437
200.4	177	300	40	2350	395	2486	834	2228	4555/5437
200.5	174	300	40	2480	395	2486	920	2228	4555/5437



200.5

18920* 8283 5577 4059 3113 2420 1969 lbs
 6'5" 15'5" 21'4" 27'8" 34'4" 41'3" 48'4" ft



8600* 3765 2535 1845 1415 1100 895 kg
 1,95 4,70 6,50 8,43 10,46 12,57 14,73 m

* Theoretical capacity at fixed hook

	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
200.1	140636	4349	10,5	4321	395	8'2"	2'9"	7'4"	14'11"/17'10"
200.2	137459	4349	10,5	4610	395	8'2"	2'9"	7'4"	14'11"/17'10"
200.3	134046	4349	10,5	4894	395	8'2"	2'9"	7'4"	14'11"/17'10"
200.4	130684	4349	10,5	5182	395	8'2"	2'9"	7'4"	14'11"/17'10"
200.5	125854	4349	10,5	5456	395	8'2"	3'0"	7'4"	14'11"/17'10"

HIGH POWER MODEL 208



standard

- control
- structure



optional

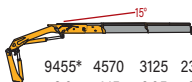
- control
- easy use



*E.C. market specific equipment

208.2

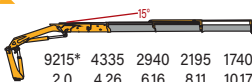
20840* 10080 6890 5210 lbs
6'7" 13'7" 19'10" 26'3" ft



9455* 4570 3125 2365 kg
2,0 4,15 6,05 8,0 m

208.3

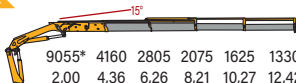
20320* 9560 6480 4840 3840 lbs
6'7" 13'12" 20'2" 26'7" 33'4" ft



9215* 4335 2940 2195 1740 kg
2,0 4,26 6,16 8,11 10,17 m










208.4

19960* 9170 6180 4570 3580 2930 lbs
6'7" 14'4" 20'6" 26'11" 33'8" 40'9" ft



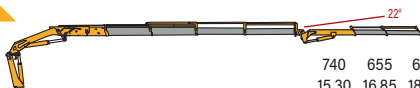
9055* 4160 2805 2075 1625 1330 kg
2,00 4,36 6,26 8,21 10,27 12,42 m

* Theoretical capacity at fixed hook

									
	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
208.2	185,5	325	50	2220	420	2500	904	2275	5270/6500
208.3	180,8	325	50	2360	420	2500	904	2275	5270/6500
208.4	177,7	325	50	2490	420	2500	935	2275	5270/6500
208.4J2	177,7	325	50	2850	420	2500	1084	2640	5270/6500
208.4J3	177,7	325	50	2910	420	2500	1084	2640	5270/6500
208.4J4	177,7	325	50	2955	420	2500	1084	2640	5270/6500
208.5	174	325	50	2610	420	2500	1000	2275	5270/6500
208.5J2	174	325	50	2980	420	2500	1084	2640	5270/6500
208.5J3	174	325	50	3040	420	2500	1084	2640	5270/6500
208.5J4	174	325	50	3085	420	2500	1084	2640	5270/6500
208.6	170,9	325	50	2710	420	2500	1030	2275	5270/6500
208.6j2	170,9	325	50	3015	420	2500	1170	2620	5270/6500
208.7	164,4	325	50	2810	420	2500	1030	2310	5270/6500



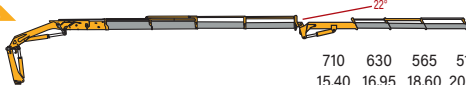
208.4J2



1630 1440 1320 lbs
50'2" 55'7" 60'8" ft

740 655 600 kg
15,30 16,85 18,50 m

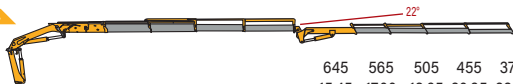
208.4J3



1570 1390 1250 1140 lbs
50'6" 55'7" 61' 66'7" ft

710 630 565 515 kg
15,40 16,95 18,60 20,30 m

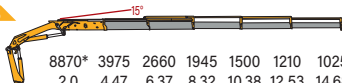
208.4J4



1420 1250 1110 1000 820 lbs
50'8" 55'9" 61'2" 66'9" 72'6" ft

645 565 505 455 370 kg
15,45 17,00 18,65 20,35 22,10 m

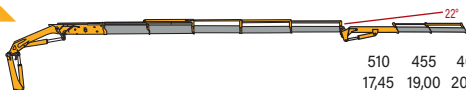
208.5



19550* 8760 5860 4290 3310 2670 2260 lbs
6'7" 14'8" 20'11" 27'3" 34'1" 41'1" 48'2" ft

8870* 3975 2660 1945 1500 1210 1025 kg
2,0 4,47 6,37 8,32 10,38 12,53 14,68 m

208.5J2

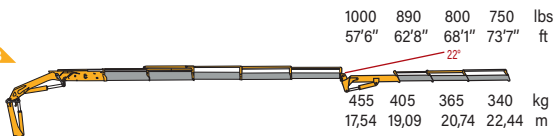


1120 1000 890 lbs
57'3" 62'4" 67'9" ft

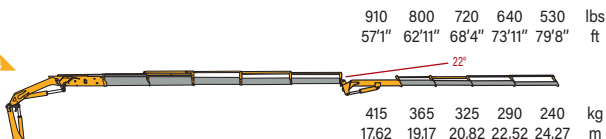
510 455 405 kg
17,45 19,00 20,66 m

* Theoretical capacity at fixed hook

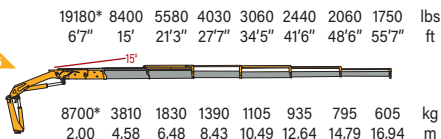
208.5J3



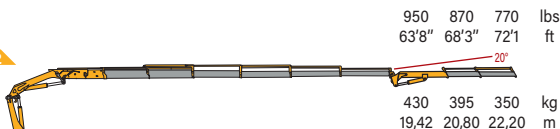
208.5J4



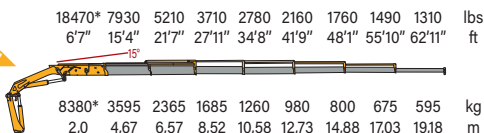
208.6



208.6J2



208.7



* Theoretical capacity at fixed hook

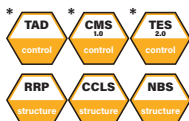
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
208.2	136818	4713	13,21	4890	420	8'2"	2'12"	7'6"	17'3"-21'3"
208.3	133351	4713	13,21	5200	420	8'2"	2'12"	7'6"	17'3"-21'3"
208.4	131065	4713	13,21	5490	420	8'2"	3'1"	7'6"	17'3"-21'3"
208.4J2	131065	4713	13,21	6280	420	8'2"	3'7"	8'8"	17'3"-21'3"
208.4J3	131065	4713	13,21	6420	420	8'2"	3'7"	8'8"	17'3"-21'3"
208.4J4	131065	4713	13,21	6510	420	8'2"	3'7"	8'8"	17'3"-21'3"
208.5	128336	4713	13,21	5750	420	8'2"	3'3"	7'6"	17'3"-21'3"
208.5J2	128336	4713	13,21	6570	420	8'2"	3'7"	8'8"	17'3"-21'3"
208.5J3	128336	4713	13,21	6700	420	8'2"	3'7"	8'8"	17'3"-21'3"
208.5J4	128336	4713	13,21	6800	420	8'2"	3'7"	8'8"	17'3"-21'3"
208.6	125902	4713	13,21	5970	420	8'2"	3'5"	7'6"	17'3"-21'3"
208.6J2	125902	4713	13,21	6650	420	8'2"	3'10"	8'7"	17'3"-21'3"
208.7	106541	4713	13,21	6190	420	8'2"	3'5"	7'7"	17'3"-21'3"

ESSENTIAL MODEL 218



standard

- control
- structure



optional

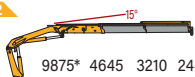
- control
- easy use



*E.C. market specific equipment

21770* 10240 7080 5380 lbs
6'7" 13'11" 20'2" 26'7" ft

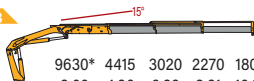
218.2



9875* 4645 3210 2440 kg
2,00 4,25 6,15 8,10 m

18490* 8470 5800 4350 3460 lbs
6'7" 14'4" 20'6" 26'11" 33'8" ft

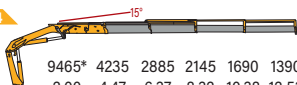
218.3



9630* 4415 3020 2270 1800 kg
2,00 4,36 6,26 8,21 10,27 m

20870* 9340 6360 4730 3730 3060 lbs
6'7" 14'8" 20'11" 27'3" 34'1" 41'1" ft

218.4



9465* 4235 2885 2145 1690 1390 kg
2,00 4,47 6,37 8,32 10,38 12,53 m

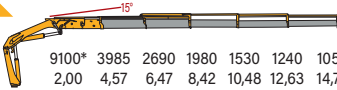
*Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
218.2	193.9	320	50	2160	420	2500	895	2270	5270/6500
218.3	188.9	320	50	2290	420	2500	895	2270	5270/6500
218.4	185.6	320	50	2420	420	2500	925	2270	5270/6500
218.5	178.6	320	50	2540	420	2500	985	2270	5270/6500
218.6	165.6	320	50	2640	420	2500	985	2270	5270/6500



20060* 8790 5930 4370 3370 2730 2310 lbs
 6'7" 14'12" 21'3" 27'7" 34'4" 41'5" 48'6" ft

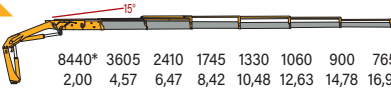
218.5



9100* 3985 2690 1980 1530 1240 1050 kg
 2,00 4,57 6,47 8,42 10,48 12,63 14,78 m










18610* 7950 5310 3850 2930 2340 1980 1690 lbs
 6'7" 14'12" 21'3" 27'7" 34'4" 41'5" 48'6" 55'7" ft

218.6



8440* 3605 2410 1745 1330 1060 900 765 kg
 2,00 4,57 6,47 8,42 10,48 12,63 14,78 16,93 m

*Theoretical capacity at fixed hook

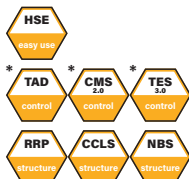
	 lbs.ft	 psi	 gal/min	 lbs	 °	 ft/inc	 ft/inc	 ft/inc	 ft/inc
218.2	142964	4641	13,21	4761	420	8'2"	2'11"	7'5"	17'3"-21'3"
218.3	139277	4641	13,21	5048	420	8'2"	2'11"	7'5"	17'3"-21'3"
218.4	136844	4641	13,21	5335	420	8'2"	3'	7'5"	17'3"-21'3"
218.5	131683	4641	13,21	5599	420	8'2"	3'3"	7'5"	17'3"-21'3"
218.6	122140	4641	13,21	5820	420	8'2"	3'3"	7'5"	17'3"-21'3"

HIGH POWER MODEL 220



standard

- easy use
- control
- structure



optional

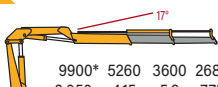
- control
- easy use



*E.C. market specific equipment

220.2

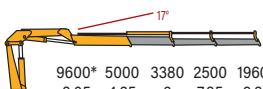
21830* 11600 7940 5910 lbs
6'1" 13'7" 19'4" 25'5" ft



9900* 5260 3600 2680 kg
2,050 4,15 5,9 7,75 m

220.3

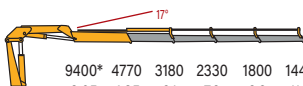
21160* 11020 7450 5510 4320 lbs
6'9" 13'11" 19'8" 25'9" 32'2" ft



9600* 5000 3380 2500 1960 kg
2,05 4,25 6 7,85 9,8 m

220.4

20720*10520 7010 5140 3970 1440 lbs
6'7" 14'3" 20" 26'1" 32'5" 39'2" ft

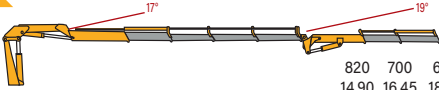


9400* 4770 3180 2330 1800 1440 kg
2,05 4,35 6,1 7,9 9,9 11,9 m

* Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
220.2	214	280	40	2870	400	2453	1083	2194	5200/6400
220.3	208,5	280	40	3024	400	2453	1083	2194	5200/6400
220.4	203,6	280	40	3170	400	2453	1127	2194	5200/6400
220.4J2	203,6	280	40	3530	400	2480	1267	2610	5200/6400
220.4J3	203,6	280	40	3606	400	2480	1267	2610	5200/6400
220.4J4	203,6	280	40	3745	400	2480	1267	2610	5200/6400
220.5	197,82	280	40	3310	400	2518	1127	2194	5200/6400
220.5J3	197,82	280	40	3748	400	2518	1267	2470	5200/6400
220.5J4	197,82	280	40	3790	400	2518	1267	2470	5200/6400
220.6	192,44	280	40	3430	400	2518	1127	2194	5200/6400
220.6j3	192,44	280	40	3866	400	2520	1127	2470	5200/6400
220.7	188,45	280	40	3532	400	2518	1127	2194	5200/6400

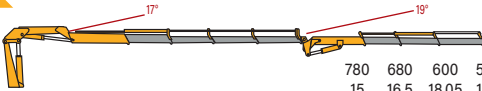
220.4J2



1810 1540 1400 lbs
48'10" 53'11" 59'0" ft

820 700 635 kg
14,90 16,45 18,00 m

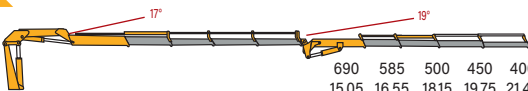
220.4J3



1720 1500 1320 1150 lbs
49'2" 54'1" 59'2" 64'6" ft

780 680 600 520 kg
15 16,5 18,05 19,7 m

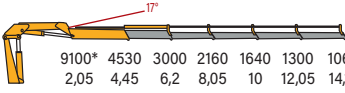
220.4J4



1520 1290 1100 980 880 lbs
49'4" 54'3" 59'5" 64'8" 70'4" ft

690 585 500 450 400 kg
15,05 16,55 18,15 19,75 21,45 m

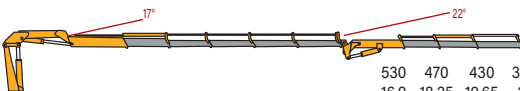
220.5



20060* 9990 6610 4760 3620 2870 2340 lbs
6'70" 14'6" 20'3" 26'4" 32'8" 39'5" 46'4" ft

9100* 4530 3000 2160 1640 1300 1060 kg
2,05 4,45 6,2 8,05 10 12,05 14,15 m

220.5J3



1170 1040 950 840 bs
55'4" 59'9" 64'5" 68'9" ft

530 470 430 380 kg
16,9 18,25 19,65 21 m

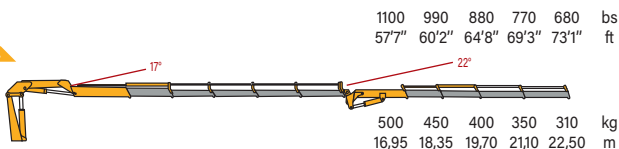
* Theoretical capacity at fixed hook



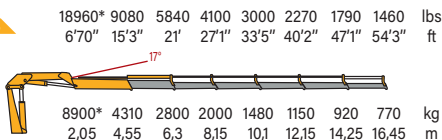
	lbs.ft	psi	gal/min	lbs	°	ft/1nc	ft/1nc	ft/1nc	ft/1nc
220.2	154889	4060	10,5	6330	400	8'1"	3'7"	8'6"	16'11" / 21'0"
220.3	150781	4060	10,5	6720	400	8'1"	3'7"	8'6"	16'11" / 21'0"
220.4	147780	4060	10,5	6990	400	8'1"	3'8"	8'6"	16'11" / 21'0"
220.4J2	147780	4060	10,5	7780	400	8'2"	4'2"	10'3"	16'11" / 21'0"
220.4J3	147780	4060	10,5	7950	400	8'2"	4'2"	10'3"	16'11" / 21'0"
220.4J4	147780	4060	10,5	8300	400	8'2"	4'2"	10'3"	16'11" / 21'0"
220.5	143571	4060	10,5	7300	400	8'3"	3'8"	8'6"	16'11" / 21'0"
220.5J3	143571	4060	10,5	8260	400	8'3"	4'2"	9'7"	16'11" / 21'0"
220.5J4	143571	4060	10,5	8360	400	8'3"	4'2"	9'7"	16'11" / 21'0"
220.6	139670	4060	10,5	7560	400	8'3"	3'8"	8'6"	16'11" / 21'0"
220.6j3	139670	4060	10,5	8520	400	8'3"	4'2"	9'7"	16'11" / 21'0"
220.7	136780	4060	10,5	7790	400	8'3"	3'8"	8'6"	16'11" / 21'0"



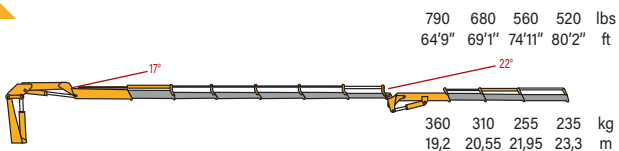
220.514



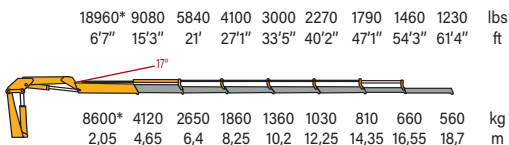
220.6



220.613



220.7



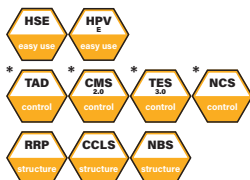
* Theoretical capacity at fixed hook

HIGH POWER MODEL 228



standard

- easy use
- control
- structure



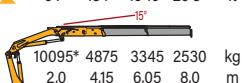
optional

- control
- easy use

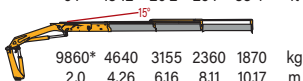


*E.C. market specific equipment

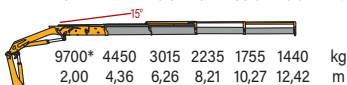
228.2 22260* 10750 7370 5580 lbs
6'7" 13'7" 19'10" 26'3" ft



228.3 21740* 10230 6960 5200 4120 lbs
6'7" 13'12" 20'2" 26'7" 33'4" ft



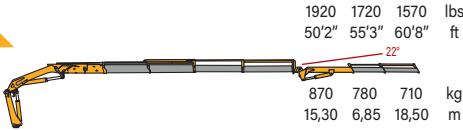
228.4 21380* 9810 6650 4930 3870 3170 lbs
6'7" 14'4" 20'6" 26'11" 33'8" 40'9" ft



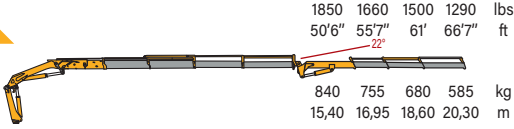
*Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
228.2	198,5	345	65	2220	420	2500	904	2275	5270/6500
228.3	193	345	65	2360	420	2500	904	2275	5270/6500
228.4	190	345	65	2490	420	2500	935	2275	5270/6500
228.4J2	190	345	65	2855	420	2500	1084	2640	5270/6500
228.4J3	190	345	65	2915	420	2500	1084	2640	5270/6500
228.4J4	190	345	65	2960	420	2500	1084	2640	5270/6500
228.5	186,7	345	65	2960	420	2500	1000	2275	5270/6500
228.5J2	186,7	345	65	2985	420	2500	1084	2640	5270/6500
228.5J3	186,7	345	65	3045	420	2500	1084	2640	5270/6500
228.5J4	186,7	345	65	3090	420	2500	1084	2640	5270/6500
228.6	183	345	65	2710	420	2500	1030	2275	5270/6500
228.6j2	183	345	65	3020	420	2500	1170	2620	5270/6500
228.7	177	345	65	2810	420	2500	1010	2310	5270/6500

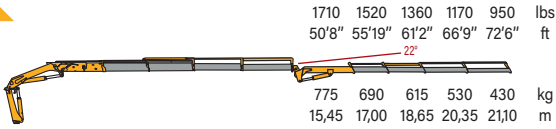
228.4J2



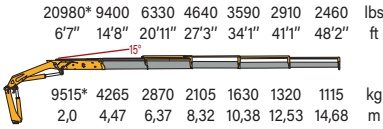
228.4J3



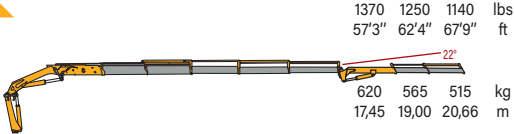
228.4J4



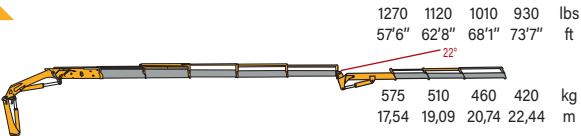
228.5



228.5J2

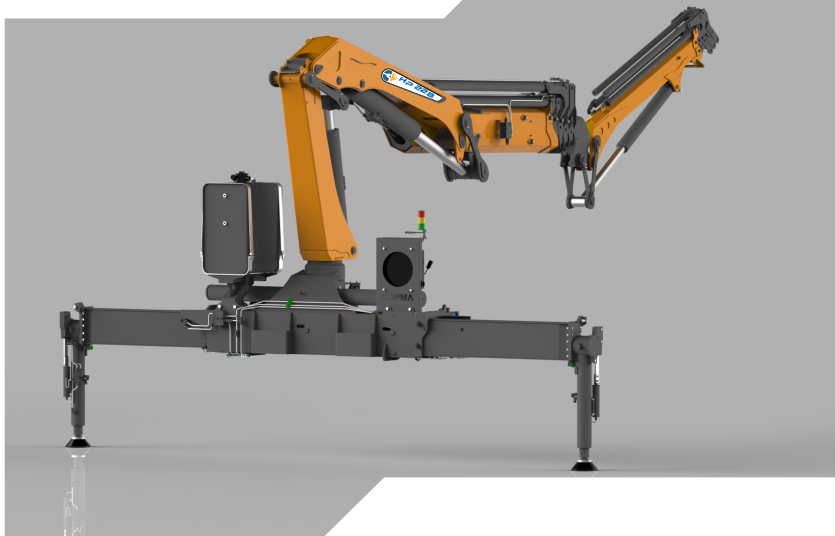


228.5J3

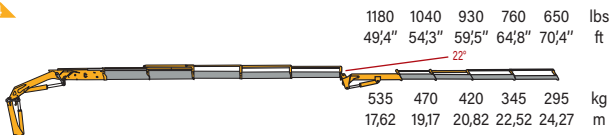


*Theoretical capacity at fixed hook

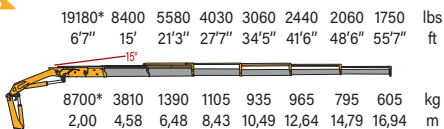
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
228.2	146406	5003	17,17	4890	420	8'2"	2'12"	7'6"	17'3"-21'3"
228.3	142349	5003	17,17	5200	420	8'2"	2'12"	7'6"	17'3"-21'3"
228.4	140317	5003	17,17	5490	420	8'2"	3'1"	7'8"	17'3"-21'3"
228.4J2	140317	5003	17,17	6290	420	8'2"	3'7"	8'8"	17'3"-21'3"
228.4J3	140317	5003	17,17	6430	420	8'2"	3'7"	8'8"	17'3"-21'3"
228.4J4	140317	5003	17,17	6530	420	8'2"	3'7"	8'8"	17'3"-21'3"
228.5	137703	5003	17,17	5750	420	8'2"	3'3"	7'6"	17'3"-21'3"
228.5J2	137703	5003	17,17	6580	420	8'2"	3'7"	8'8"	17'3"-21'3"
228.5J3	137703	5003	17,17	6710	420	8'2"	3'7"	8'8"	17'3"-21'3"
228.5J4	137703	5003	17,17	6810	420	8'2"	3'7"	8'8"	17'3"-21'3"
228.6	134974	5003	17,17	5970	420	8'2"	3'5"	7'8"	17'3"-21'3"
228.6j2	134974	5003	17,17	6660	420	8'2"	3'10"	8'7"	17'3"-21'3"
228.7	130549	5003	17,17	6190	420	8'2"	3'4"	7'7"	17'3"-21'3"



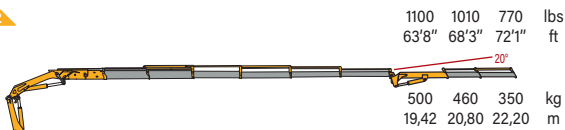
228.5J4



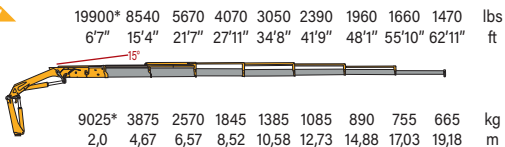
228.6



228.6J2



228.7



*Theoretical capacity at fixed hook

ESSENTIAL MODEL 238



standard

- easy use
- control
- structure



optional

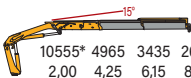
- control
- easy use



*E.C. market specific equipment

238.2

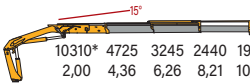
23270*10950 7570 5750 lbs
6'7" 13'11" 20'2" 26'7" ft



10555* 4965 3435 2610 kg
2,00 4,25 6,15 8,10 m

238.3

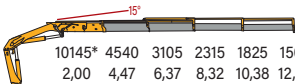
22730*10420 7150 5380 4280 lbs
6'7" 14'4" 20'6" 26'11" 33'8" ft



10310* 4725 3245 2440 1940 kg
2,00 4,36 6,26 8,21 10,27 m

238.4

22370*10010 6850 5100 4020 3310 lbs
6'7" 14'8" 20'11" 27'3" 34'1" 41'1" ft



10145* 4540 3105 2315 1825 1500 kg
2,00 4,47 6,37 8,32 10,38 12,53 m

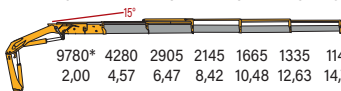
*Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
238.2	207.7	340	65	2160	420	2500	895	2270	5270/6500
238.3	202.2	340	65	2290	420	2500	895	2270	5270/6500
238.4	198.9	340	65	2420	420	2500	925	2270	5270/6500
238.5	192	340	65	2540	420	2500	985	2270	5270/6500
238.6	178,9	340	65	2640	420	2500	985	2270	5270/6500



238.5

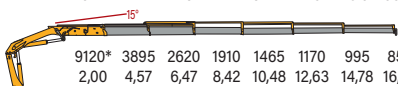
21560* 9440 6400 4730 3670 2730 2520 lbs
 6'7" 14'12" 21'3" 27'7" 34'4" 41'5" 48'6" ft



9780* 4280 2905 2145 1665 1335 1145 kg
 2,00 4,57 6,47 8,42 10,48 12,63 14,78 m

238.6

20110* 8590 5780 4210 3230 2580 2190 1870 lbs
 6'7" 14'12" 21'3" 27'7" 34'4" 41'5" 48'6" 55'7" ft



9120* 3895 2620 1910 1465 1170 995 850 kg
 2,00 4,57 6,47 8,42 10,48 12,63 14,78 16,93 m

* Theoretical capacity at fixed hook

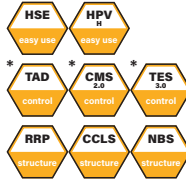
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
238.2	153139	4931	17,17	4762	420	8'2"	2'11"	7'5"	17'3"-21'3"
238.3	149084	4931	17,17	5048	420	8'2"	2'11"	7'5"	17'3"-21'3"
238.4	146650	4931	17,17	5335	420	8'2"	3'	7'5"	17'3"-21'3"
238.5	141563	4931	17,17	5599	420	8'2"	3'3"	7'5"	17'3"-21'3"
238.6	131972	4931	17,17	5820	420	8'2"	3'3"	7'5"	17'3"-21'3"

HIGH POWER MODEL 240



standard

- easy use
- control
- structure



optional

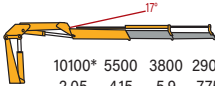
- control
- easy use



*E.C. market specific equipment

240.2

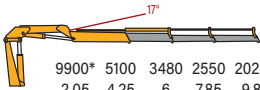
22270* 12130 8380 6390 lbs
6'9" 13'7" 19'4" 25'5" ft



10100* 5500 3800 2900 kg
2,05 4,15 5,9 7,75 m

240.3

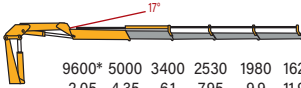
21830* 11240 7670 5620 4453 lbs
6'9" 13'11" 19'8" 25'9" 32'2" ft



9900* 5100 3480 2550 2020 kg
2,05 4,25 6 7,85 9,8 m

240.4

21160* 11020 7500 5580 4370 3570 lbs
6'7" 14'3" 20' 26'1" 32'5" 39'2" ft



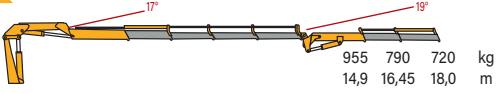
9600* 5000 3400 2530 1980 1620 kg
2,05 4,35 6,1 7,95 9,9 11,95 m

*Theoretical capacity at fixed hook

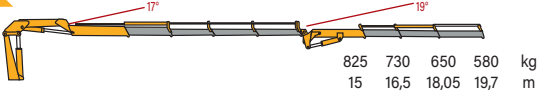


	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
240.2	224	280	40	2870	400	2453	1083	2194	5200/6400
240.3	219	280	40	3024	400	2453	1083	2194	5200/6400
240.4	213	280	40	3170	400	2453	1127	2194	5200/6400
240.4J2	213	280	40	3530	400	2480	1267	2610	5200/6400
240.4J3	213	280	40	3606	400	2480	1267	2610	5200/6400
240.4J4	213	280	40	3745	400	2480	1267	2610	5200/6400
240.5	207	280	40	3310	400	2518	1127	2194	5200/6400
240.5J3	207	280	40	3748	400	2518	1267	2470	5200/6400
240.5J4	207	280	40	3790	400	2518	1267	2470	5200/6400
240.6	207	280	40	3430	400	2518	1127	2194	5200/6400
240.6J3	201	280	40	3866	400	2520	1127	2470	5200/6400
240.7	198	280	40	3532	400	2518	1127	2194	5145/6398

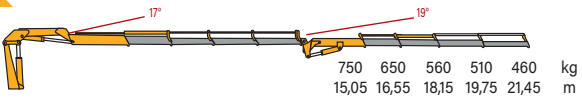
240.4J2



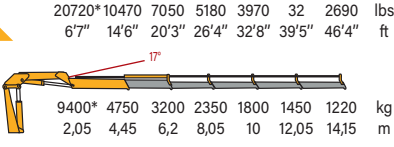
240.4J3



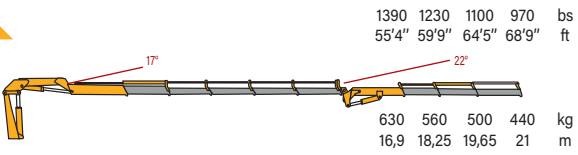
240.4J4



240.5



240.5J3



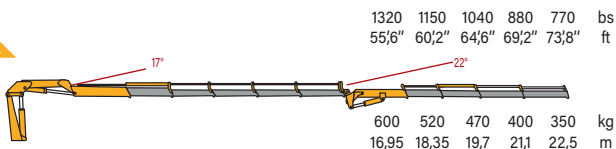
* Theoretical capacity at fixed hook



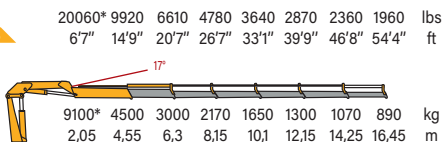
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
240.2	161956	4060	10,5	6330	400	8'1"	3'7"	8'6"	16'11" / 21'10"
240.3	158320	4060	10,5	6720	400	8'1"	3'7"	8'6"	16'11" / 21'10"
240.4	154329	4060	10,5	6990	400	8'1"	3'8"	8'6"	16'11" / 21'10"
240.4J2	154329	4060	10,5	7780	400	8'2"	4'2"	10'3"	16'11" / 21'10"
240.4J3	154329	4060	10,5	7950	400	8'2"	4'2"	10'3"	16'11" / 21'10"
240.4J4	154329	4060	10,5	8300	400	8'2"	4'2"	10'3"	16'11" / 21'10"
240.5	149983	4060	10,5	7300	400	8'3"	3'8"	8'6"	16'11" / 21'10"
240.5J3	149983	4060	10,5	8260	400	8'3"	4'2"	9'7"	16'11" / 21'0"
240.5J4	149983	4060	10,5	8360	400	8'3"	4'2"	9'7"	16'11" / 21'0"
240.6	145282	4060	10,5	7560	400	8'3"	3'8"	8'6"	16'11" / 21'10"
240.6J3	145282	4060	10,5	8520	400	8'3"	4'2"	9'7"	16'11" / 21'0"
240.7	143526	4060	10,5	7790	400	8'3"	3'8"	8'6"	16'11" / 21'10"



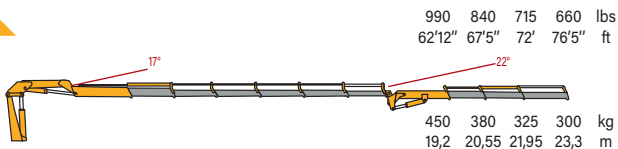
240.514



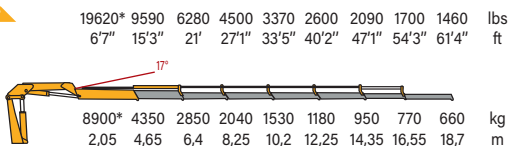
240.6



240.613



240.7



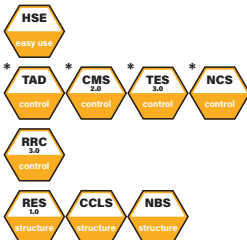
* Theoretical capacity at fixed hook

TOP RANGE MODEL 280B



standard

- easy use
- control
- structure



optional

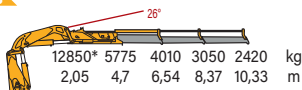
- control
- easy use



*E.C. market specific equipment

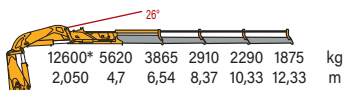
280B.3

28330*12730 8840 6720 5340 lbs
6'91" 15'4" 21'5" 27'6" 33'11" ft



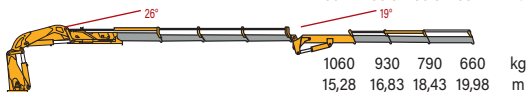
280B.4

27780*12390 8520 6420 5050 4130 lbs
6'7" 15'4" 21'5" 27'5" 33'9" 40'5" ft



280B.4J3

2340 2050 1740 1460 lbs
50'1" 55'3" 60'6" 65'7" ft



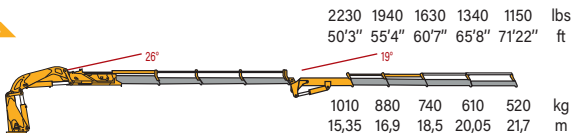
*Theoretical capacity at fixed hook

*600" for Extra E.C. market

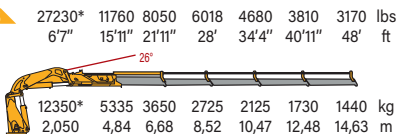


	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
280B.3	261	310	50	3600	∞*	2448	1246	2309	5200/6400/7800
280B.4	259,1	310	50	3780	∞*	2470	1267	2309	5200/6400/7800
280B.4J3	259,1	310	50	4275	∞*	2470	1469	2595	5200/6400/7800
280B.4J4	259,1	310	50	4325	∞*	2470	1469	2595	5200/6400/7800
280B.5	253	310	50	3930	∞*	2475	1267	2309	5200/6400/7800
280B.5J3	253	310	50	4490	∞*	2475	1447	2665	5200/6400/7800
280B.5J4	253	310	50	4550	∞*	2475	1447	2665	5200/6400/7800
280B.6	253,4	310	50	4080	∞*	2518	1342	2309	5200/6400/7800
280B.6J2	253,4	310	50	4580	∞*	2518	1472	2665	5200/6400/7800
280B.6J3	253,4	310	50	4640	∞*	2518	1472	2665	5200/6400/7800
280B.6J4	253,4	310	50	4700	∞*	2518	1472	2665	5200/6400/7800
280B.7	243	310	50	4205	∞*	2518	1340	2309	5200/6400/7800
280B.8	244	310	50	4330	∞*	2518	1370	2309	5200/6400/7800

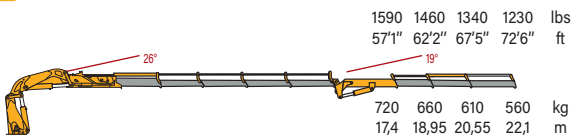
280B.4J4



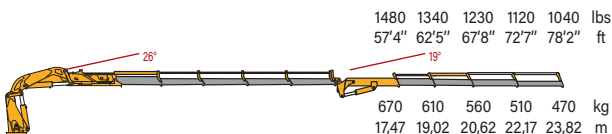
208B.5



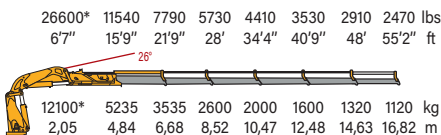
280B.5J3



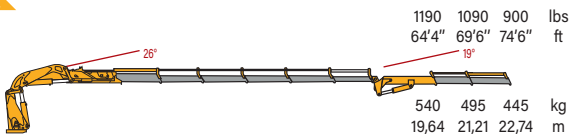
280B.5J4



280B.6



280B.6J2



*Theoretical capacity at fixed hook

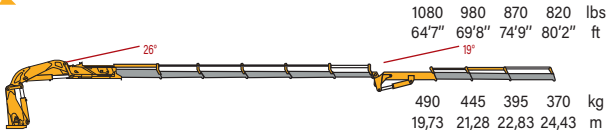
600 for Extra E.C. market



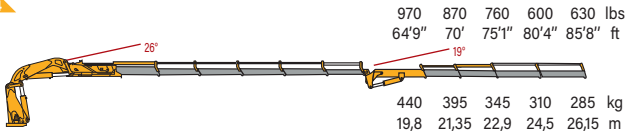
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
280B.3	188590	4495	13,7	7940	∞*	8'0"	4'1"	9'1"	6'9"/21'0"/25'5"
280B.4	187000	4495	13,1	8330	∞*	8'1"	4'2"	9'1"	6'9"/21'0"/25'5"
280B.4J3	187000	4495	13,1	9560	∞*	8'1"	4'10"	8'6"	6'9"/21'0"/25'5"
280B.4J4	187000	4495	13,1	9700	∞*	8'1"	4'10"	8'6"	6'9"/21'0"/25'5"
280B.5	183217	4495	13,7	8660	∞*	8'1"	4'2"	7'7"	6'9"/21'0"/25'5"
280B.5J3	183217	4495	13,7	9890	∞*	8'1"	4'9"	8'9"	6'9"/21'0"/25'5"
280B.5J4	183217	4495	13,7	10030	∞*	8'1"	4'9"	8'9"	6'9"/21'0"/25'5"
280B.6	183000	4495	13,1	8990	∞*	8'3"	4'5"	7'7"	6'9"/21'0"/25'5"
280B.6J2	183000	4495	13,1	10090	∞*	8'3"	4'10"	8'9"	6'9"/21'0"/25'5"
280B.6J3	183000	4495	13,1	10120	∞*	8'3"	4'10"	8'9"	6'9"/21'0"/25'5"
280B.6J4	183000	4495	13,1	10360	∞*	8'3"	4'10"	8'9"	6'9"/21'0"/25'5"
280B.7	175796	4495	13,7	9270	∞*	8'3"	4'5"	7'7"	6'9"/21'0"/25'5"
280B.8	176000	4495	13,1	9550	∞*	8'3"	4'6"	7'7"	6'9"/21'0"/25'5"



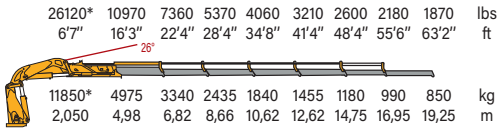
280B.6J3



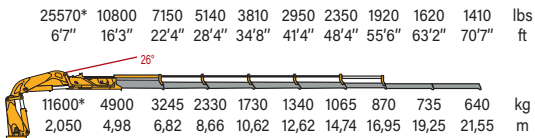
280B.6J4



280B.7



280B.8



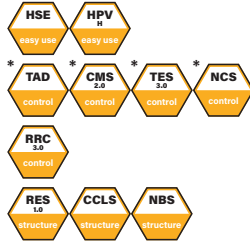
*Theoretical capacity at fixed hook

TOP RANGE MODEL 300



standard

- easy use
- control
- structure



optional

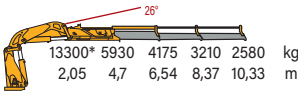
- control
- easy use



*E.C. market specific equipment

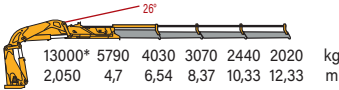
300.3

29320*13070 9200 7080 5690 lbs
6'9" 15'5" 21'5" 27'6" 33'11" ft



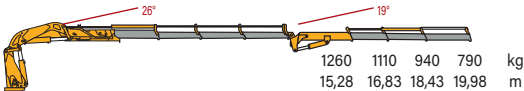
300.4

28660*12760 8880 6770 5380 4450 lbs
6'9" 15'5" 21'6" 27'6" 33'11" 40'5" ft



300.4J3

2780 2450 2070 1740 lbs
50'1" 55'3" 60'6" 65'7" ft



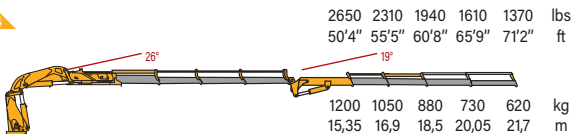
*Theoretical capacity at fixed hook

*600° for Extra E.C. market

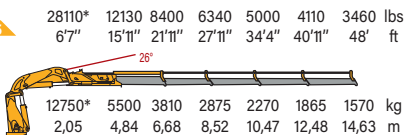


	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
300.3	273	310	50	3620	∞*	2448	1246	2309	5155/6425/7800
300.4	267	310	50	3800	∞*	2470	1267	2309	5155/6425/7800
300.4J3	267	310	50	4360	∞*	2470	1469	2595	5155/6425/7800
300.4J4	267	310	50	4420	∞*	2470	1469	2595	5155/6425/7800
300.5	261	310	50	3950	∞*	2475	1267	2309	5155/6425/7800
300.5J3	261	310	50	4510	∞*	2475	1447	2665	5155/6425/7800
300.5J4	261	310	50	4570	∞*	2475	1447	2665	5155/6425/7800
300.6	256,4	310	50	4100	∞*	2518	1342	2309	5155/6425/7800
300.6J2	256,4	310	50	4600	∞*	2518	1472	2665	5155/6425/7800
300.6J3	256,4	310	50	4660	∞*	2518	1472	2665	5155/6425/7800
300.6J4	256,4	310	50	4720	∞*	2518	1472	2665	5155/6425/7800
300.7	251	310	50	4225	∞*	2518	1340	2309	5155/6425/7800
300.8	246,92	310	50	4350	∞*	2518	1370	2309	5155/6425/7800

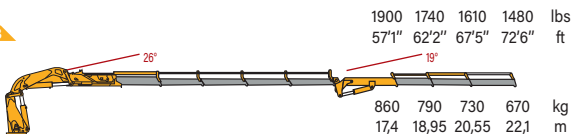
300.4J4



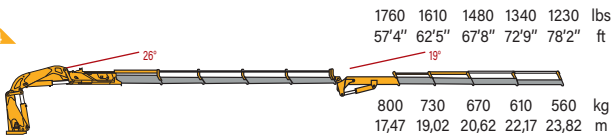
300.5



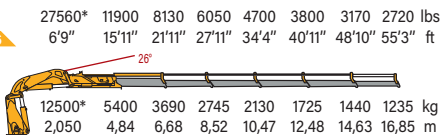
300.5J3



300.5J4



300.6



* Theoretical capacity at fixed hook

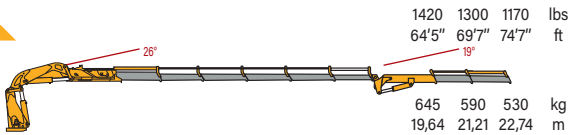
*600° for Extra E.C. market



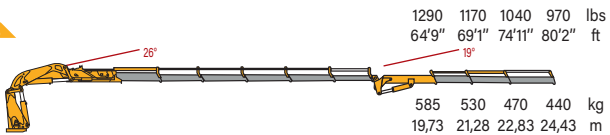
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
300.3	18884	4495	13,7	7980	∞*	8'4"	4'1"	9'1"	16'11"/21'11"/25'7"
300.4	193000	4495	13,1	8377	∞*	8'4"	4'2"	9'1"	16'11"/21'11"/25'7"
300.4J3	193000	4495	13,1	9610	∞*	8'4"	4'10"	8'6"	16'9"/21'0"/25'5"
300.4J4	193000	4495	13,1	9750	∞*	8'4"	4'10"	8'6"	16'9"/21'0"/25'5"
300.5	192380	4495	13,7	8710	∞*	8'4"	4'2"	7'7"	16'11"/21'11"/25'7"
300.5J3	192380	4495	13,7	9940	∞*	8'4"	4'9"	8'9"	16'9"/21'0"/25'5"
300.5J4	192380	4495	13,7	10080	∞*	8'4"	4'9"	8'9"	16'9"/21'0"/25'5"
300.6	185000	4495	13,1	9040	∞*	8'4"	4'5"	7'7"	16'11"/21'11"/25'7"
300.6J2	185000	4495	13,1	10140	∞*	8'4"	4'10"	8'9"	16'9"/21'0"/25'5"
300.6J3	185000	4495	13,1	10270	∞*	8'4"	4'10"	8'9"	16'9"/21'0"/25'5"
300.6J4	185000	4495	13,1	10410	∞*	8'4"	4'10"	8'9"	16'9"/21'0"/25'5"
300.7	181626	4495	13,7	9295	∞*	8'4"	4'5"	7'7"	16'11"/21'11"/25'7"
300.8	179000	4495	13,1	9600	∞*	8'4"	4'6"	7'7"	16'11"/21'11"/25'7"



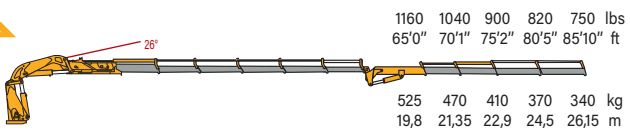
300.612



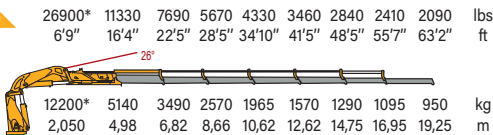
300.613



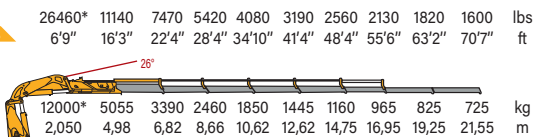
300.614



300.7



300.8



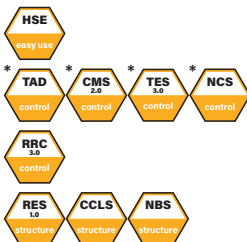
*Theoretical capacity at fixed hook

TOP RANGE MODEL 340



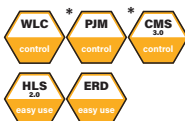
standard

- easy use
- control
- structure



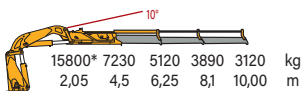
optional

- control
- easy use

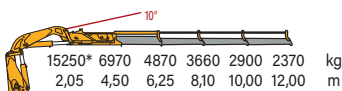


*E.C. market specific equipment

340.3 34830* 15940 11290 8580 6880 lbs
6'9" 14'9" 20'6" 26'7" 32'1" ft

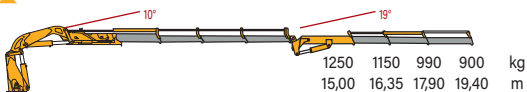


340.4 33620* 15370 10740 8070 6390 5220 lbs
6'9" 14'9" 20'6" 26'7" 32'10" 39'4" ft



340.4J3

2760 2540 2180 1980 lbs
49'2" 53'8" 58'9" 63'8" ft



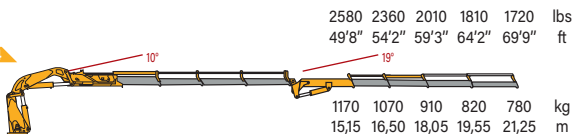
*Theoretical capacity at fixed hook

*600° for Extra E.C. market

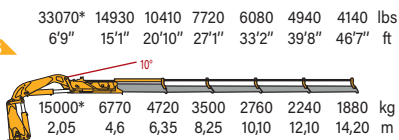


	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
340.3	319,17	290	60	3990	∞*	2540	1338	2354	6200/7800
340.4	307,7	290	60	4160	∞*	2540	1338	2355	6200/7800
340.4J3	307,7	290	60	4720	∞*	2540	1540	2640	6200/7800
340.4J4	307,7	290	60	4780	∞*	2540	1540	2640	6200/7800
340.5	305,5	290	60	4320	∞*	2540	1338	2355	6200/7800
340.5J3	305,5	290	60	4880	∞*	2540	1540	2640	6200/7800
340.5J4	305,5	290	60	4940	∞*	2540	1540	2640	6200/7800
340.6	270	290	60	4480	∞*	2540	1442	2355	6200/7800
340.6J2	270	290	60	4980	∞*	2540	1540	2696	6200/7800
340.6J3	270	290	60	5040	∞*	2540	1540	2696	6200/7800
340.6J4	270	290	60	5100	∞*	2540	1540	2696	6200/7800
340.7	294,96	290	60	4610	∞*	2540	1442	2355	6200/7800
340.8	281,6	290	60	4720	∞*	2540	1442	2355	6200/7800

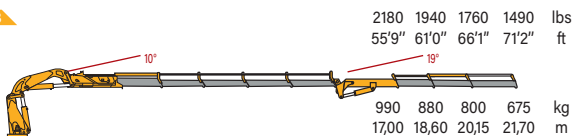
340.4J4



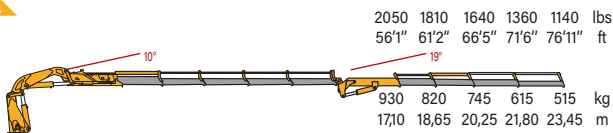
340.5



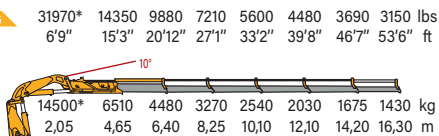
340.5J3



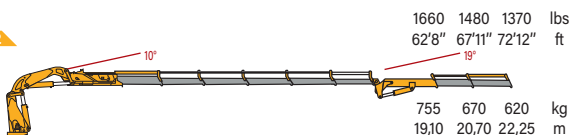
340.5J4



340.6



340.6J2



*Theoretical capacity at fixed hook

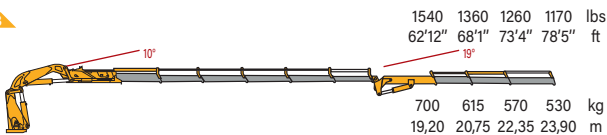
*600° for Extra E.C. market



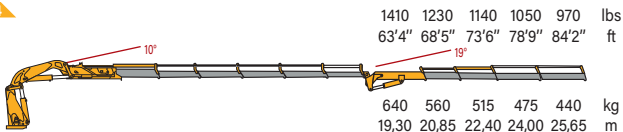
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
340.3	230856	4205	15,8	8800	∞*	8'4"	4'9"	7'9"	20'5"/25'7"
340.4	230856	4205	15,8	9170	∞*	8'4"	4'9"	7'9"	20'5"/25'7"
340.4J3	230856	4205	15,8	10710	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
340.4J4	230856	4205	15,8	10890	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
340.5	220968	4205	15,8	9520	∞*	8'4"	4'9"	7'9"	20'5"/25'7"
340.5J3	220968	4205	15,8	10760	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
340.5J4	220968	4205	15,8	10890	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
340.6	219026	4205	15,8	9880	∞*	8'4"	4'9"	7'9"	20'5"/25'7"
340.6J2	219026	4205	15,8	10980	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
340.6J3	219026	4205	15,8	11110	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
340.6J4	219026	4205	15,8	11240	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
340.7	217551	4205	15,8	10160	∞*	8'4"	4'9"	7'9"	20'5"/25'7"
340.8	211167	4205	15,8	10410	∞*	8'4"	4'9"	7'9"	20'5"/25'7"



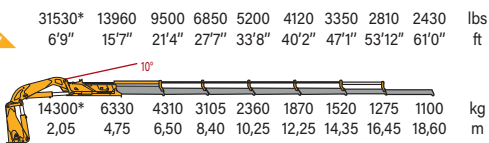
340.6J3



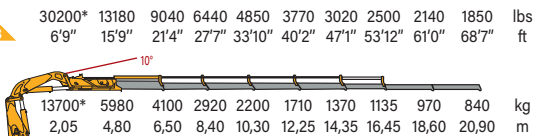
340.6J4



340.7



340.8



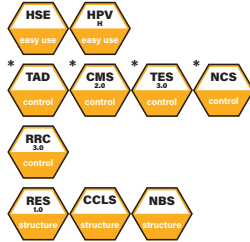
*Theoretical capacity at fixed hook

TOP RANGE MODEL 360



standard

- easy use
- control
- structure



optional

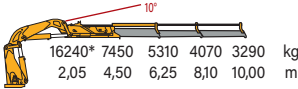
- control
- easy use



*E.C. market specific equipment

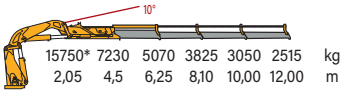
360.3

35800*16420 11710 8970 7250 lbs
6'9" 14'9" 20'6" 26'7" 32'10" ft



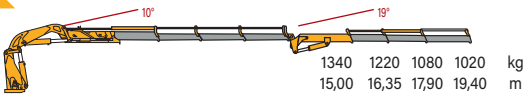
360.4

34720*15940 11180 8430 6720 5540 lbs
6'9" 14'9" 20'6" 26'7" 32'10" 39'4" ft



360.4J3

2950 2690 2380 2250 lbs
49'2" 53'8" 58'9" 63'8" ft



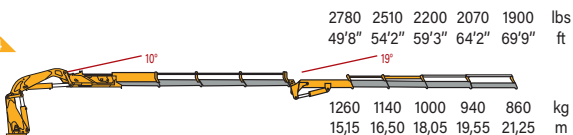
*Theoretical capacity at fixed hook

*600° for Extra E.C. market

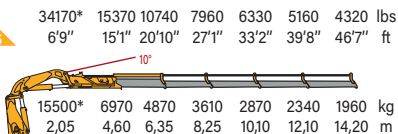


	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
360.3	328,88	300	60	3990	∞*	2540	1338	2354	6200/7800
360.4	319,17	300	60	4160	∞*	2540	1338	2354	6200/7800
360.4J3	319,17	300	60	4630	∞*	2540	1540	2640	6200/7800
360.4J4	319,17	300	60	4780	∞*	2540	1540	2640	6200/7800
360.5	314,53	300	60	4320	∞*	2540	1338	2354	6200/7800
360.5J3	314,53	300	60	4880	∞*	2540	1540	2640	6200/7800
360.5J4	314,53	300	60	4940	∞*	2540	1540	2640	6200/7800
360.6	307,45	300	60	4480	∞*	2540	1413	2354	6200/7800
360.6J2	307,45	300	60	4980	∞*	2540	1540	2696	6200/7800
360.6J3	307,45	300	60	5040	∞*	2540	1540	2696	6200/7800
360.6J4	307,45	300	60	5100	∞*	2540	1540	2696	6200/7800
360.7	304,28	300	60	4610	∞*	2540	1432	2354	6200/7800
360.8	291,95	300	60	4720	∞*	2540	1442	2354	6200/7800

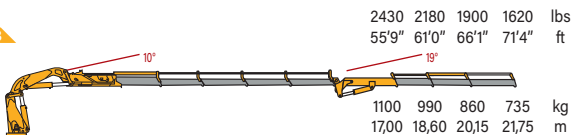
360.4J4



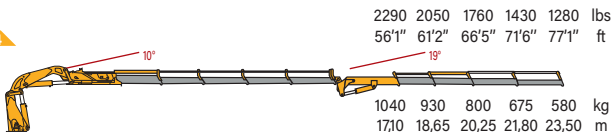
360.5



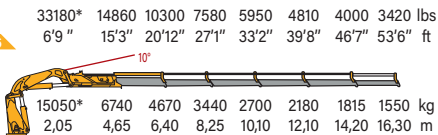
360.5J3



360.5J4



360.6



*Theoretical capacity at fixed hook

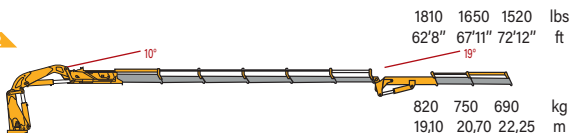
*600° for Extra E.C. market



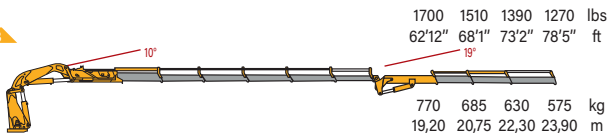
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
360.3	237878	4350	15,8	8800	∞*	8'4"	4'5"	7'9"	20'5"/25'7"
360.4	230856	4350	15,8	9170	∞*	8'4"	4'5"	7'9"	20'5"/25'7"
360.4J3	230856	4350	15,8	10339	∞*	8'4"	5'1"	8'8"	20'5"/25'7"
360.4J4	230856	4350	15,8	10537	∞*	8'4"	5'1"	8'8"	20'5"/25'7"
360.5	227500	4350	15,8	9520	∞*	8'4"	4'5"	7'9"	20'5"/25'7"
360.5J3	220968	4350	15,8	10760	∞*	8'4"	5'1"	8'8"	20'5"/25'7"
360.5J4	220968	4350	15,8	10890	∞*	8'4"	5'1"	8'8"	20'5"/25'7"
360.6	222379	4350	15,8	9880	∞*	8'4"	4'8"	7'9"	20'5"/25'7"
360.6J2	222379	4350	15,8	10980	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
360.6J3	222379	4350	15,8	11110	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
360.6J4	222379	4350	15,8	11240	∞*	8'4"	5'1"	8'10"	20'5"/25'7"
360.7	222085	4350	15,8	10160	∞*	8'4"	4'8"	7'9"	20'5"/25'7"
360.8	211167	4350	15,8	10410	∞*	8'4"	4'9"	7'9"	20'5"/25'7"



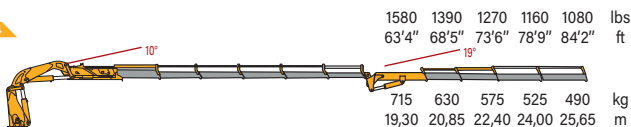
360.6J2



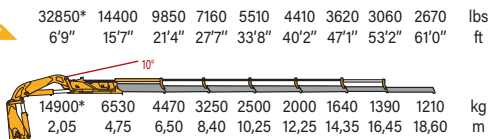
360.6J3



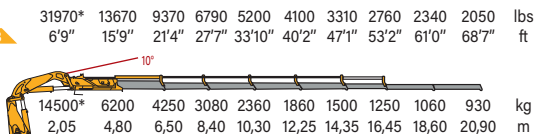
360.6J4



360.7



360.8



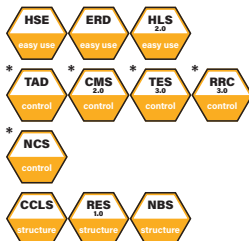
*Theoretical capacity at fixed hook

TOP RANGE MODEL 450



standard

- easy use
- control
- structure



optional

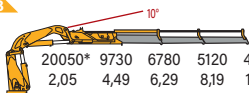
- control



*E.C. market specific equipment

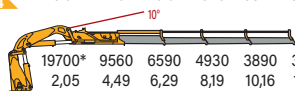
450.3

44200*	21450	14945	11285	8995	lbs
6'9"	14'9"	20'8"	26'10"	33'4"	ft
20050*	9730	6780	5120	4080	kg
2,05	4,49	6,29	8,19	10,16	m



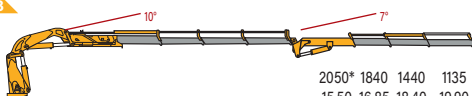
450.4

43430*	21075	14525	10865	8575	7055	lbs
6'9"	14'9"	20'8"	26'10"	33'4"	39'11"	ft
19700*	9560	6590	4930	3890	3200	kg
2,05	4,49	6,29	8,19	10,16	12,16	m



450.4J3

4519	4057	3175	2502	lbs
50'9"	55'3"	60'4"	65'3"	ft
2050*	1840	1440	1135	kg
15,50	16,85	18,40	19,90	m

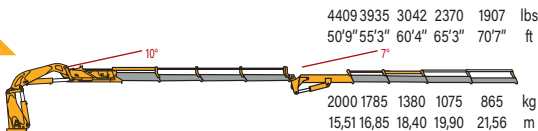


*Theoretical capacity at fixed hook

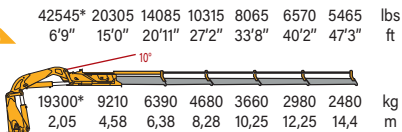


	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
450.3	428.7	315	60	4960	∞	2525	1329	2349	7800
450.4	421	315	60	5140	∞	2525	1329	2349	7800
450.4j3	421	315	60	5920	∞	2525	1650	2570	7800
450.4j4	421	315	60	6020	∞	2525	1650	2570	7800
450.5	413.5	315	60	5300	∞	2525	1345	2349	7800
450.5j3	413.5	315	60	6080	∞	2536	1570	2767	7800
450.5j4	413.5	315	60	6180	∞	2536	1570	2767	7800
450.6	407	315	60	5480	∞	2525	1422	2349	7800
450.6j3	407	315	60	6260	∞	2525	1570	2800	7800
450.6j4	407	315	60	6360	∞	2525	1570	2800	7800
450.7	402	320	60	5500	∞	2525	1451	2388	7800
450.7j3	402	320	60	6100	∞	2525	1701	2710	7800
450.7j4	402	320	60	6165	∞	2525	1701	2710	7800
450.8	396	320	60	5620	∞	2525	1451	2388	7800

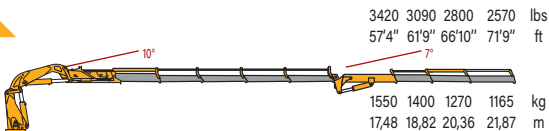
450.4J4



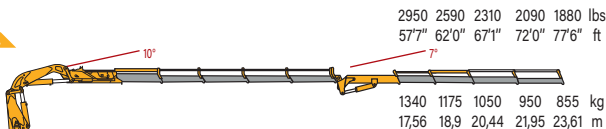
450.5



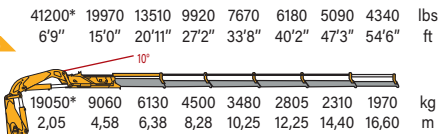
450.5J3



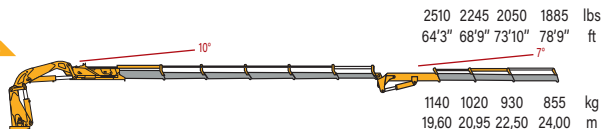
450.5J4



450.6



450.6J3



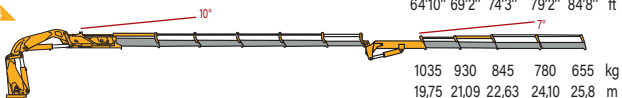
*Theoretical capacity at fixed hook



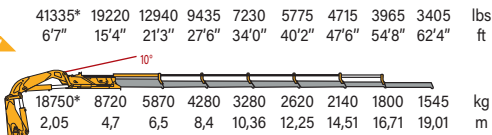
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
450.3	315677	4568	15,8	10912	∞	8'3"	4'4"	7'8"	25'7"
450.4	310514	4568	15,8	11308	∞	8'3"	4'4"	7'8"	25'7"
450.4j3	310514	4568	15,8	13050	∞	8'3"	5'2"	7'8"	25'7"
450.4j4	310514	4568	15,8	13270	∞	8'3"	5'2"	8'5"	25'7"
450.5	304613	4568	15,8	11680	∞	8'3"	4'5"	7'8"	25'7"
450.5j3	304613	4568	15,8	13400	∞	8'3"	5'2"	7'8"	25'7"
450.5J4	304613	4568	15,8	13620	∞	8'3"	5'2"	7'8"	25'7"
450.6	300118	4568	15,8	12056	∞	8'3"	4'8"	7'8"	25'7"
450.6j3	300118	4568	15,8	13776	∞	8'3"	5'2"	7'8"	25'7"
450.6j4	300118	4568	15,8	13996	∞	8'3"	5'2"	7'8"	25'7"
450.7	296500	4640	15,8	12130	∞	8'3"	4'9"	7'10"	25'7"
450.7j3	296500	4640	15,8	13450	∞	8'3"	5'7"	8'11"	25'7"
450.7j4	296500	4640	15,8	13590	∞	8'3"	5'7"	8'11"	25'7"
450.8	292075	4640	15,8	12390	∞	8'3"	4'9"	7'10"	25'7"



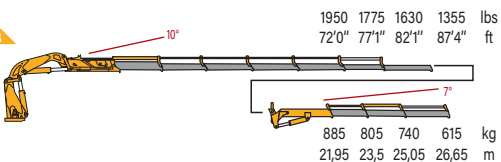
450.614



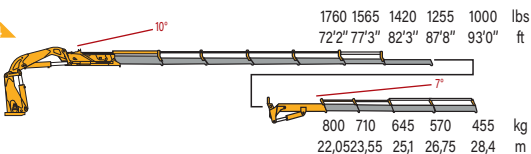
450.7



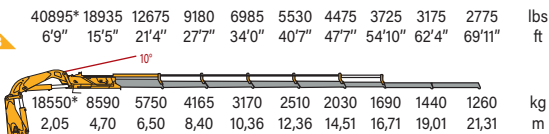
450.713



450.714



450.8



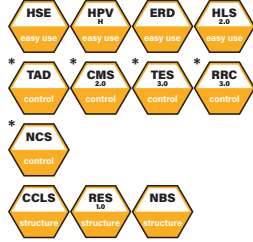
* Theoretical capacity at fixed hook

TOP RANGE MODEL 510



standard

- easy use
- control
- structure



optional

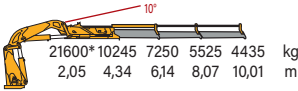
- control



*E.C. market specific equipment

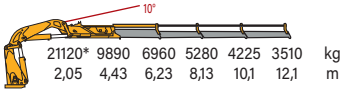
510.3

47520* 22539 15950 12155 9757 lbs
6'7" 14'2" 20'1" 26'5" 32'8" ft



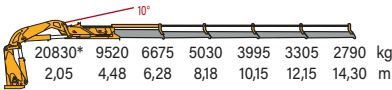
510.4

46570* 21810 15350 11640 9320 7740 lbs
6'9" 14'6" 20'5" 26'8" 33'2" 39'8" ft



510.5

45826* 20944 14685 11066 8789 7271 6138 lbs
6'7" 14'7" 20'6" 26'8" 33'3" 39'9" 46'9" ft



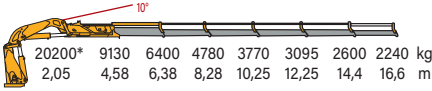
*Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
510.3	437	325	70	4960	∞	2525	1329	2349	7800
510.4	429	325	70	5140	∞	2525	1329	2349	7800
510.5	418	325	70	5300	∞	2525	1345	2349	7800
510.6	411	320	70	5480	∞	2525	1437	2349	7800
510.6J4	411	320	70	6360	∞	2525	1570	2800	7800
510.7	410	320	70	5540	∞	2525	1451	2388	7800
510.7J3	410	320	70	6070	∞	2525	1701	2710	7800
510.7J4	410	320	70	6135	∞	2525	1701	2710	7800
510.8	402	320	70	5670	∞	2525	1451	2388	7800

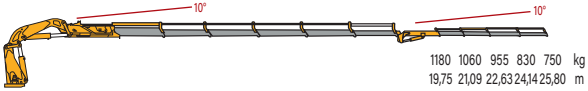
510.6

44540* 20130 14110 10540 8310 6825 5735 4940 lbs
6'9" 15'0" 20'11" 27'2" 33'8" 40'2" 47'3" 54'6" ft



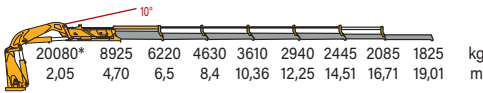
510.6J4

2600 2340 2105 1830 1655 lbs
64'10" 69'2" 74'3" 79'2" 84'8" ft



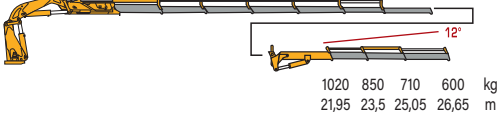
510.7

44176* 19635 13684 10186 7942 6468 5379 4587 4015 lbs
6'7" 15'4" 21'3" 27'6" 34'0" 40'2" 47'6" 54'8" 62'4" ft



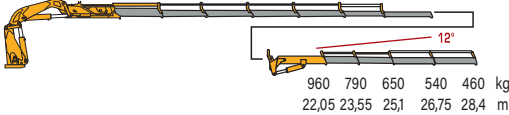
510.7J3

2250 1870 1570 1320 lbs
72'0" 77'1" 82'1" 87'5" ft



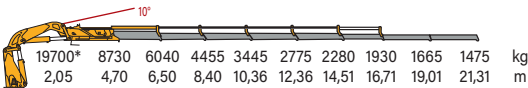
510.7J4

2110 1740 1430 1190 1010 lbs
72'2" 77'3" 82'3" 87'8" 93'0" ft



510.8

43440* 19250 13320 9825 7600 6120 5030 4255 3670 3255 lbs
6'9" 15'5" 21'4" 27'7" 33'12" 40'7" 47'7" 54'10" 62'4" 69'11" ft



*Theoretical capacity at fixed hook



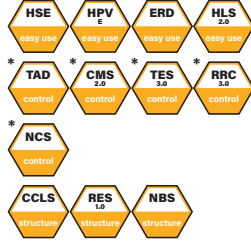
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
510.3	316299	4712	18.4	10912	∞	8'3"	4'4"	7'8"	25'7"
510.4	310802	4712	18.4	11308	∞	8'3"	4'4"	7'8"	25'7"
510.5	302918	4712	18.4	11680	∞	8'3"	4'5"	7'8"	25'7"
510.6	297566	4640	18.4	12056	∞	8'3"	4'8"	7'8"	25'7"
510.6J4	297566	4640	18.4	13996	∞	8'3"	5'2"	7'8"	25'7"
510.7	296625	4640	18.4	12188	∞	8'3"	4'9"	7'10"	25'7"
510.7J3	296625	4640	18.4	13356	∞	8'3"	5'7"	8'11"	25'7"
510.7J4	296625	4640	18.4	13500	∞	8'3"	5'7"	8'11"	25'7"
510.8	291128	4640	18.4	12474	∞	8'3"	4'9"	7'10"	25'7"

TOP RANGE MODEL 530



standard

- easy use
- control
- structure



optional

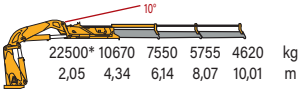
- control



*E.C. market specific equipment

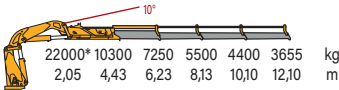
530.3

49500* 23474 16610 12661 10164 lbs
6'7" 14'2" 20'1" 26'5" 32'8" ft



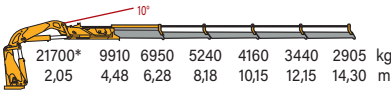
530.4

48500* 22710 15980 12130 9700 8060 lbs
6'9" 14'6" 20'5" 26'8" 33'2" 39'8" ft



530.5

47740* 21802 15290 11528 9152 7568 6391 lbs
6'7" 14'7" 20'6" 26'8" 33'3" 39'9" 46'9" ft

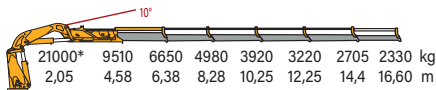


*Theoretical capacity at fixed hook

	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
530.3	455	330	70	4960	∞	2525	1329	2349	7800
530.4	447	330	70	5140	∞	2525	1329	2349	7800
530.5	435	330	70	5300	∞	2525	1345	2349	7800
530.6	427	330	70	5480	∞	2525	1437	2349	7800
530.6J4	427	330	70	6360	∞	2525	1570	2800	7800
530.7	424	330	70	5540	∞	2525	1451	2388	7800
530.7j3	424	330	70	6070	∞	2525	1701	2710	7800
530.7j4	424	330	70	6135	∞	2525	1701	2710	7800
530.8	415	330	70	5670	∞	2525	1451	2388	7800

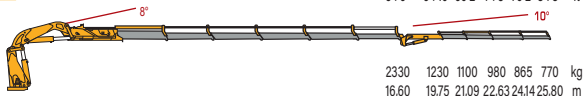
46300* 20970 14660 10980 8640 7100 5960 5140 lbs
 6'9" 15'0" 20'11" 27'2" 33'8" 40'2" 47'3" 54'6" ft

530.6



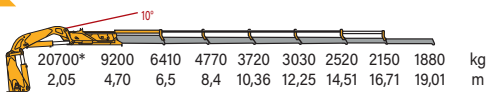
5140 2710 2430 2160 1910 1700 lbs
 54'6" 64'10" 69'2" 74'3" 79'2" 84'8" ft

530.6J4



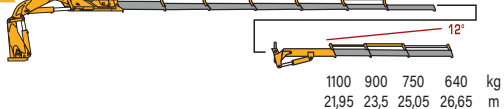
45540* 20240 14102 10494 8184 6666 5544 4730 4136 lbs
 6'7" 15'4" 21'3" 27'6" 34'0" 40'2" 47'6" 54'8" 62'4" ft

530.7



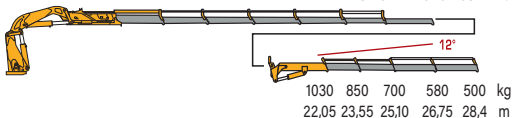
2430 1980 1650 1410 lbs
 72'0" 77'1" 82'2" 87'5" ft

530.7J3



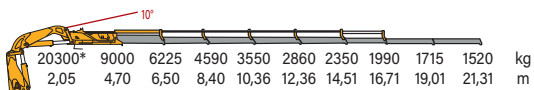
530.7J4

2270 1870 1540 1280 1100 lbs
 72'4" 77'3" 82'4" 87'9" 93'2" ft



530.8

44750* 19840 13720 10120 7830 6310 5180 4390 3780 3350 lbs
 6'9" 15'5" 21'4" 27'7" 34'0" 40'7" 47'7" 54'10" 62'4" 69'11" ft



* Theoretical capacity at fixed hook



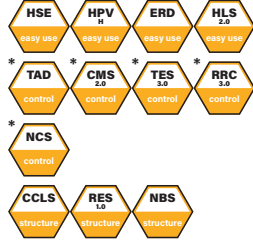
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
530.3	329535	4857	18.4	10912	∞	8'3"	4'4"	7'8"	25'7"
530.4	323677	4857	18.4	11308	∞	8'3"	4'4"	7'8"	25'7"
530.5	315142	4857	18.4	11680	∞	8'3"	4'5"	7'8"	25'7"
530.6	308994	4857	18.4	12056	∞	8'3"	4'8"	7'8"	25'7"
530.6J4	297566	4857	18.4	13996	∞	8'3"	5'2"	7'8"	25'7"
530.7	306896	4857	18.4	12188	∞	8'3"	4'9"	7'10"	25'7"
530.7j3	296625	4857	18.4	13356	∞	8'3"	5'7"	8'11"	25'7"
530.7j4	296625	4857	18.4	13500	∞	8'3"	5'7"	8'11"	25'7"
530.8	300170	4857	18.4	12474	∞	8'3"	4'9"	7'10"	25'7"

TOP RANGE MODEL 630



standard

- easy use
- control
- structure



optional

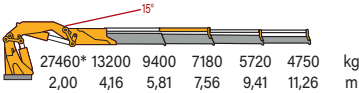
- control



*E.C. market specific equipment

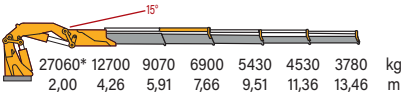
630.4

60540* 29100 20720 15830 12610 10470 lbs
6'7" 13'8" 19'1" 24'10" 30'10" 36'11" ft



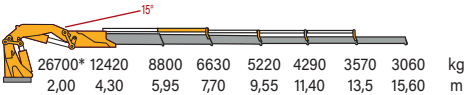
630.5

59660* 28000 20000 15210 11970 9990 8330 lbs
6'7" 14'0" 19'5" 25'2" 31'2" 37'3" 44'2" ft



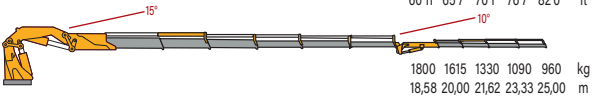
630.6

58860* 27380 19400 14620 11510 9460 7870 6750 lbs
6'7" 14'1" 19'6" 25'3" 31'4" 37'5" 44'3" 51'2" ft



630.6J4

3970 3560 2930 2400 2120 lbs
60'11" 65'7" 70'1" 76'7" 82'0" ft



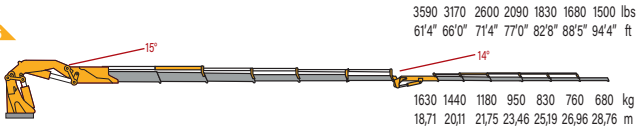
*Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
630.4	538	330	70	6030	∞	2515	1500	2470	8300
630.5	532	330	70	6290	∞	2515	1500	2470	8300
630.6	524	330	70	6530	∞	2515	1500	2470	8300
630.6J4	524	330	70	7630	∞	2515	1700	2844	8300
630.6j6	517	330	70	7790	∞	2515	1700	2844	8300
630.7	517	330	70	6525	∞	2515	1500	2500	8300
630.8	514	330	70	6870	∞	2515	1500	2500	8300

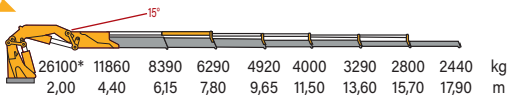


630.6J6



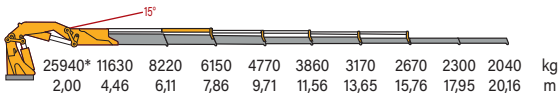
57420*	26150	18500	13870	10850	8820	7250	6170	5380	lbs
6'7"	14'5"	20'0"	25'7"	31'8"	37'9"	44'7"	51'6"	58'9"	ft

630.7



630.8

57078*	25640	18120	13560	10520	8510	6990	5890	5070	4500	lbs
6'7"	14'8"	20'1"	25'9"	31'10"	37'11"	44'9"	51'8"	58'11"	66'3"	ft



* Theoretical capacity at fixed hook



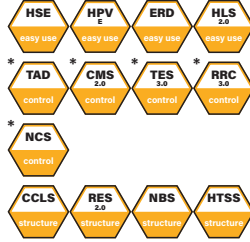
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
630.4	389135	4785	18.4	13375	∞	8'3"	4'11"	8'11"	27'3"
630.5	384795	4785	18.4	13886	∞	8'3"	4'11"	8'11"	27'3"
630.6	379009	4785	18.4	1440	∞	8'3"	4'11"	8'11"	27'3"
630.6J4	379009	4785	18.4	16820	∞	8'3"	5'7"	7'8"	27'3"
630.6J6	379009	4785	18.4	17170	∞	8'3"	5'7"	7'10"	27'3"
630.7	373946	4785	18.4	14825	∞	8'3"	4'11"	8'11"	27'3"
630.8	371776	4785	18.4	15145	∞	8'3"	4'11"	8'11"	27'3"

TOP RANGE MODEL 650



standard

- easy use
- control
- structure



optional

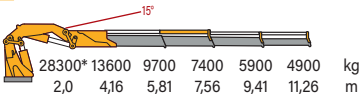
- control



*E.C. market specific equipment

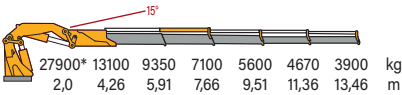
650.4

62260* 29980 21380 16310 13010 10800 lbs
6'7" 13'8" 19'1" 24'10" 30'10" 36'11" ft



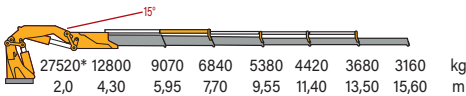
650.5

61510* 22880 20610 15650 12350 10300 8600 lbs
6'7" 14'0" 19'5" 25'2" 31'2" 37'3" 44'2" ft



650.6

60670* 28220 20000 15080 11860 9740 8110 6970 lbs
6'7" 14'1" 19'6" 25'3" 31'4" 37'5" 44'3" 51'2" ft

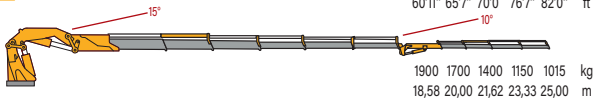


*Theoretical capacity at fixed hook

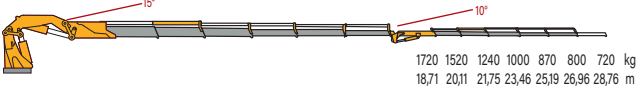


	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
650.4	555	310	70	6060	∞	2515	1500	2470	8300
650.5	548	310	70	6290	∞	2515	1500	2470	8300
650.6	540	310	70	6530	∞	2515	1500	2470	8300
650.6j4	540	310	70	7630	∞	2515	1700	2844	8300
650.6j6	540	310	70	7790	∞	2515	1700	2844	8300
650.7	533	310	70	6700	∞	2515	1500	2500	8300
650.8	530	310	70	6900	∞	2515	1500	2500	8300
650.8j4	530	310	70	7675	∞	2525	1700	2844	8300
650.8j6	530	310	70	7760	∞	2525	1700	2844	8300

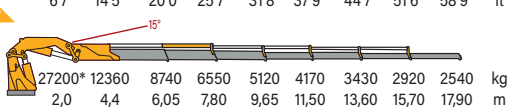
650.6J4



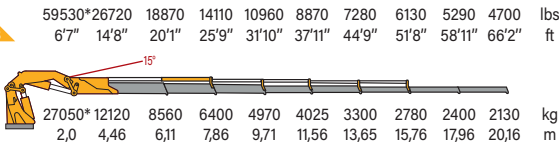
650.6J6



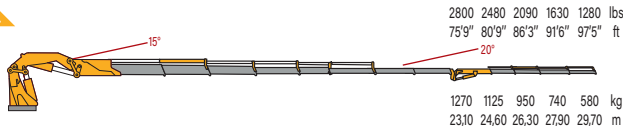
650.7



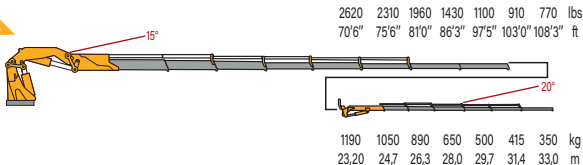
650.8



650.8J4



650.8J6



* Theoretical capacity at fixed hook

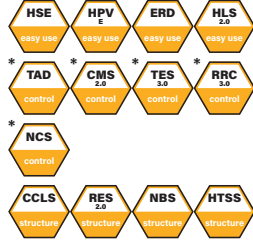
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
650.4	401431	4785	18.4	13375	∞	8'3"	4'11"	8'11"	27'3"
650.5	396368	4785	18.4	13886	∞	8'3"	4'11"	8'11"	27'3"
650.6	390582	4785	18.4	14400	∞	8'3"	4'11"	8'11"	27'3"
650.6J4	390582	4785	18.4	16820	∞	8'3"	5'7"	9'4"	27'3"
650.6J6	390582	4785	18.4	17170	∞	8'3"	5'7"	9'4"	27'3"
650.7	385518	4785	18.4	14770	∞	8'3"	4'11"	8'2"	27'3"
650.8	383349	4785	18.4	15211	∞	8'3"	4'11"	8'11"	27'3"
650.8J4	383349	4785	18.4	16921	∞	8'3"	5'7"	9'4"	27'3"
650.8J6	383349	4785	18.4	17110	∞	8'3"	5'7"	9'4"	27'3"

TOP RANGE MODEL 820



standard

- easy use
- control
- structure



optional

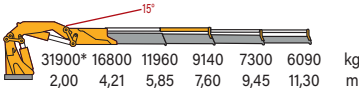
- control



*E.C. market specific equipment

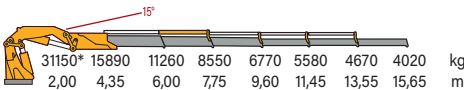
820.4

70325* 37035 26365 20150 16090 13425 lbs
6'7" 14'0" 19'2" 24'10" 31'0" 37'10" ft



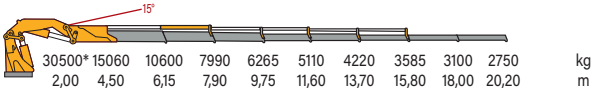
820.6

68670* 35030 24825 18850 14925 12300 10295 8860 lbs
6'7" 14'3" 19'8" 25'5" 31'6" 37'7" 44'5" 51'4" ft



820.8

67240* 33200 23370 17615 13810 11265 9305 7905 6835 6060 lbs
6'7" 14'9" 20'2" 25'1" 31'1" 38'1" 44'1" 51'1" 59'0" 66'3" ft



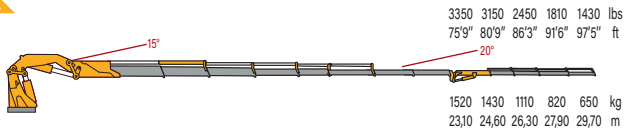
*Theoretical capacity at fixed hook



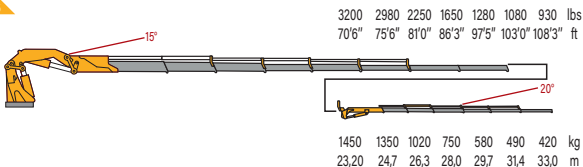
	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
820.4	694	345	70	7180	∞	2500	1660	2480	8300
820.6	678	345	70	7650	∞	2500	1660	2480	8300
820.8	665	345	70	8100	∞	2520	1670	2500	8300
820.8j4	665	345	70	8870	∞	2510	1850	2810	8300
820.8j6	665	345	70	8960	∞	2510	1850	2810	8300



820.8J4



820.8J6



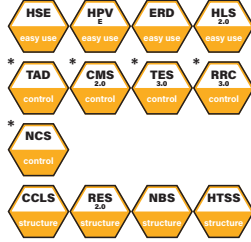
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
820.4	511868	5004	18.4	13290	∞	8'2"	5'5"	8'2"	27'3"
820.6	500067	5004	18.4	14330	∞	8'2"	5'5"	8'2"	27'3"
820.8	490479	5004	18.4	17857	∞	8'3"	5'6"	8'2"	27'3"
820.8j4	490479	5004	18.4	19554	∞	8'3"	6'1"	9'3"	27'3"
820.8j6	490479	5004	18.4	19775	∞	8'3"	6'1"	9'3"	27'3"

TOP RANGE MODEL 950



standard

- easy use
- control
- structure



optional

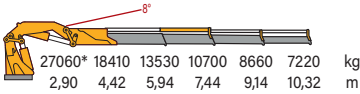
- control



*E.C. market specific equipment

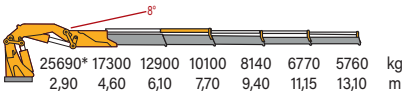
950.4

59660* 40560 29830 23590 19090 15920 lbs
9'6" 14'6" 19'6" 24'5" 29'12" 35'10" ft



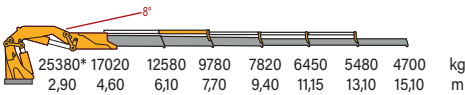
950.5

56640* 38140 28440 22270 17950 14930 12700 lbs
9'6" 15'1" 20'0" 25'3" 30'10" 37'9" 42'12" ft



950.6

55950* 37520 27530 21560 17240 14220 12080 10360 lbs
9'6" 15'1" 20'0" 25'3" 30'10" 36'7" 43'0" 49'6" ft

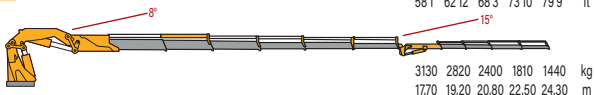


*Theoretical capacity at fixed hook



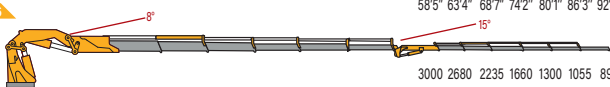
	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
950.4	805	345	80	8370	∞	2550	2000	2474	8800
950.5	781	345	80	8795	∞	2550	2000	2474	8800
950.6	768	345	80	9055	∞	2550	2000	2474	8800
950.6j4	768	345	80	9845	∞	2550	2160	2850	8800
950.6j6	768	345	80	9960	∞	2550	2160	2850	8800
950.7	760	345	80	9400	∞	2550	1980	2474	8800
950.8	747	345	80	9520	∞	2525	1980	2710	8800
950.8j4	747	345	80	10305	∞	2550	2160	2850	8800
950.8j6	747	345	80	10425	∞	2550	2160	2850	8800
950.9	742	345	80	9700	∞	2525	1701	2710	8800

950.6J4



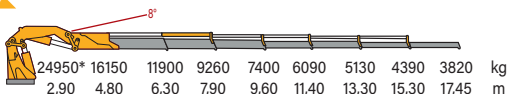
6900 6220 5290 3990 3170 lbs
 58'1" 62'12" 68'3" 73'10" 79'9" ft
 3130 2820 2400 1810 1440 kg
 17,70 19,20 20,80 22,50 24,30 m

950.6J6



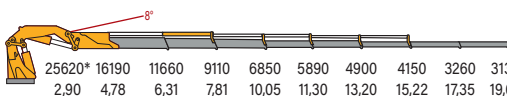
6610 5910 4930 3660 2870 2330 1960 lbs
 58'5" 63'4" 68'7" 74'2" 80'1" 86'3" 92'4" ft
 3000 2680 2235 1660 1300 1055 890 kg
 17,81 19,31 20,91 22,61 24,41 26,28 28,15 m

950.7



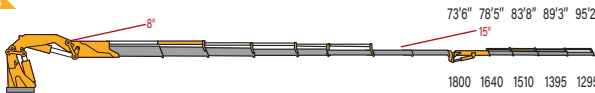
55000* 35600 26230 20410 16310 13430 11310 9680 8420 lbs
 9'6" 15'9" 20'8" 25'11" 31'6" 37'5" 43'8" 50'2" 57'3" ft
 24950* 16150 11900 9260 7400 6090 5130 4390 3820 kg
 2,90 4,80 6,30 7,90 9,60 11,40 13,30 15,30 17,45 m

950.8



56480* 35690 25710 20080 15100 12990 10800 9150 7190 6900 lbs
 9'6" 15'8" 20'8" 25'7" 32'12" 37'1" 43'4" 49'11" 56'11" 64'5" ft
 25620* 16190 11660 9110 6850 5890 4900 4150 3260 3130 kg
 2,90 4,78 6,31 7,81 10,05 11,30 13,20 15,22 17,35 19,63 m

950.8J4



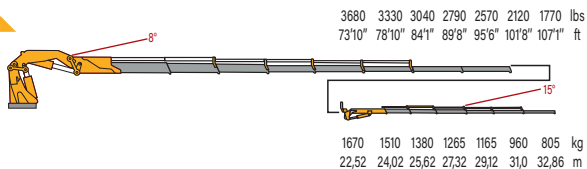
3970 3620 3330 3080 2850 lbs
 73'6" 78'5" 83'8" 89'3" 95'2" ft
 1800 1640 1510 1395 1295 kg
 22,40 23,90 25,50 27,20 29,00 m

* Theoretical capacity at fixed hook

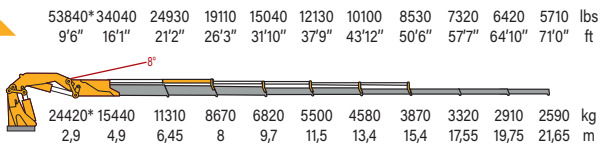
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc
950.4	593885	5003	21	19140	∞	8'4"	6'7"	8'1"
950.5	575298	5003	21	19390	∞	8'4"	6'7"	8'1"
950.6	566447	5003	21	19960	∞	8'4"	6'7"	8'1"
950.6J4	566447	5003	21	21700	∞	8'4"	7'1"	9'4"
950.6J6	566447	5003	21	21960	∞	8'4"	7'1"	9'4"
950.7	560547	5003	21	20720	∞	8'4"	6'6"	8'11"
950.8	550811	5003	21	20990	∞	8'4"	6'6"	8'11"
950.8J4	550811	5003	21	22720	∞	8'4"	7'1"	9'4"
950.8J6	550811	5003	20	22980	∞	8'4"	7'1"	9'4"
950.9	547344	5003	21	21380	∞	8'4"	7'1"	9'4"



950.816



950.9



* Theoretical capacity at fixed hook

HIGH POWER MODEL 1100SC



standard

• easy use



• control



• structure



optional

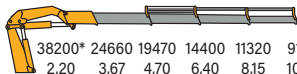
• control



*E.C. market specific equipment

1100SC.4

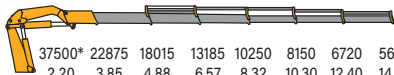
81570* 54370 42520 31750 24960 20080 lbs
7'2" 12' 15'4" 21' 26'7" 33'2" ft



38200* 24660 19470 14400 11320 9110 kg
2,20 3,67 4,70 6,40 8,15 10,10 m

1100SC.6

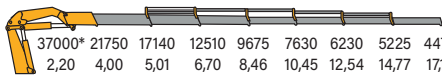
82670* 50430 39720 29070 22600 17970 14810 12490 lbs
7'2" 12'6" 16' 21'6" 27'3" 33'8" 40'7" 47'9" ft



37500* 22875 18015 13185 10250 8150 6720 5665 kg
2,20 3,85 4,88 6,57 8,32 10,30 12,40 14,60 m

1100SC.7

8160* 47950 37790 27580 21330 16820 13730 11520 9850 lbs
7'2" 13'1" 16'4" 22' 27'8" 34'3" 41'1" 48'5" 61'4" ft



37000* 21750 17140 12510 9675 7630 6230 5225 4470 kg
2,20 4,00 5,01 6,70 8,46 10,45 12,54 14,77 17,15 m

* Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
1100sc.4	888,1	330	100	8900	Cont.	2535	1987	2768	9050/1090
1100sc.6	864,2	330	100	9500	Cont.	2535	2105	2768	9050/1090
1100sc.7	853,73	330	100	9920	Cont.	2535	2105	2768	9050/1090



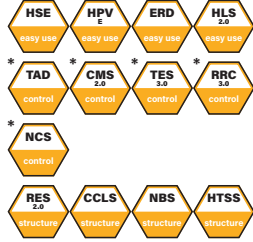
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
1100sc.4	644570	4785	26,3	19625	Cont.	8'4"	6'6"	9'1"	29'9"/35'10"
1100sc.6	637000	4785	26,3	20950	Cont.	8'4"	6'11"	9'1"	29'9"/35'10"
1100sc.7	619630	4785	26,3	21870	Cont.	8'4"	6'11"	9'1"	29'9"/35'10"

TOP RANGE MODEL 1150



standard

- easy use
- control
- structure



optional

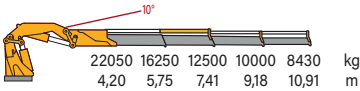
- control



*E.C. market specific equipment

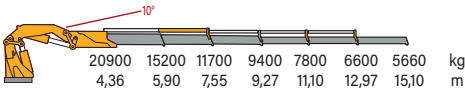
1150.4

48610 35820 27560 22050 18580 lbs
13'9" 18'10" 24'4" 30'10" 36'11" ft



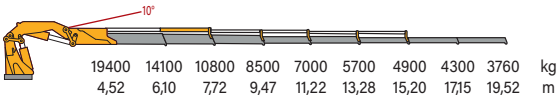
1150.6

46080 35510 25790 20720 17200 14550 12350 lbs
14'4" 19'4" 24'9" 30'5" 36'5" 42'7" 49'6" ft



1150.8

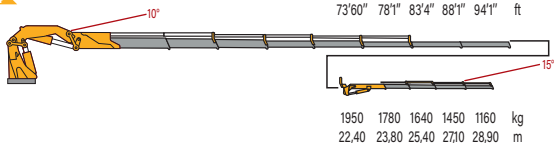
42770 31080 23810 18740 15430 12750 10800 9480 4700 lbs
14'10" 20'0" 25'4" 31'10" 36'10" 43'7" 49'10" 56'3" 64'1" ft



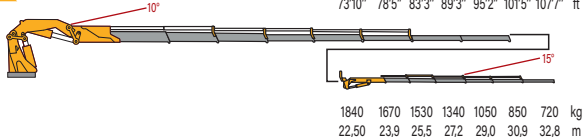
	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
1150.4	908	335	110	8680	∞	2530	2297	2653	8800
1150.6	894	335	110	9310	∞	2550	2000	2474	8800
1150.6j6	894	335	110	10215	∞	2542	2113	2998	8800
1150.8	860	335	110	9740	∞	2525	1980	2710	8800
1150.8j4	860	335	110	10530	∞	2550	2113	3000	8800
1150.8j6	860	335	110	10645	∞	2550	2113	3000	8800
1150.10	853	335	110	9700	∞	2550	1888	2790	8800



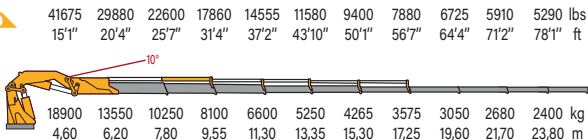
1150.8J4



1150.8J6



1150.10



	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
1150.4	656756	4858	28,9	19130	∞	8'4"	6'2"	8'8"	28'11"
1150.6	646630	4858	28,9	20525	∞	8'4"	6'2"	8'9"	28'11"
1150.6j6	646630	4858	28,9	22520	∞	8'4"	6'11"	9'10"	28'11"
1150.8	622038	4858	28,9	21470	∞	8'4"	7'6"	8'11"	28'11"
1150.8j4	622038	4858	28,9	23210	∞	8'4"	6'11"	9'10"	28'11"
1150.8j6	622038	4858	28,9	23461	∞	8'4"	6'11"	9'10"	28'11"
1150.10	616975	4858	28,9	21380	∞	8'4"	6'2"	9'2"	28'11"

TOP RANGE MODEL 1600



standard

• easy use



• control



• structure



optional

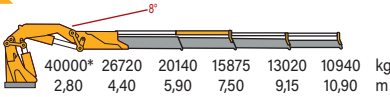
• control



*E.C. market specific equipment

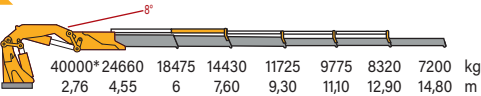
1600.4

88200* 58910 44400 35000 28700 24120 lbs
9'22" 14'5" 19'4" 24'7" 30'0" 35'9" ft



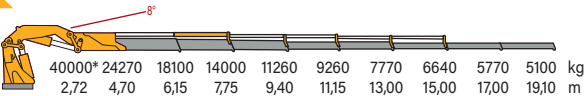
1600.6

88200* 54370 40730 31810 25850 21550 18340 15870 lbs
9'06" 14'11" 19'8" 24'11" 30'6" 36'1" 42'4" 48'7" ft



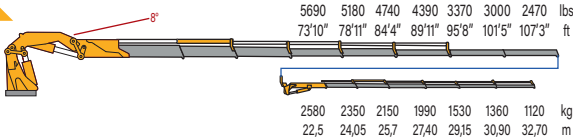
1600.8

88200* 53510 39900 30860 24820 20410 17130 14640 12720 11240 lbs
8'92" 15'5" 20'2" 25'5" 30'10" 36'7" 42'8" 49'3" 55'9" 62'8" ft



1600.8J6

5690 5180 4740 4390 3370 3000 2470 lbs
73'10" 78'11" 84'4" 89'11" 95'8" 101'5" 107'3" ft



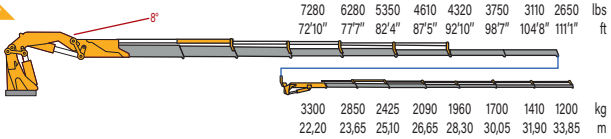
* Theoretical capacity at fixed hook



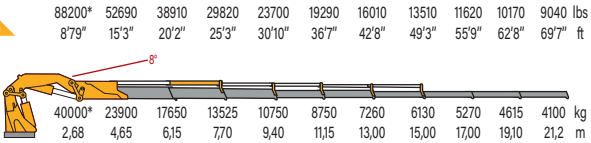
	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
1600.4	1170	345	100+50	12750	cont.	2550	3600	2444	9100/1090/1270
1600.6	1149	345	100+50	13700	cont.	2550	3600	2444	9100/1090/1270
1600.8	1135	345	100+50	1436	cont.	2550	3600	2444	9100/1090/1270
1600.8J7	1135	345	100+50	1596	cont.	2550	3600	2886	9100/1090/1270
1600.9	1090,23	345	100+50	14660	cont.	2550	3600	2595	9100/1090/1270
1600.9J7	1090,23	345	100+50	16260	cont.	2550	3600	2895	9100/1090/1270



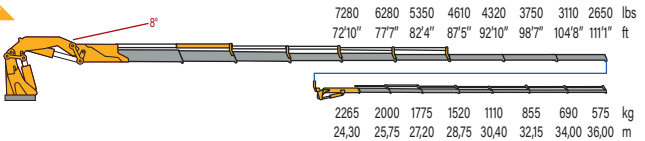
1600.8J7



1600.9



1600.9J7



* Theoretical capacity at fixed hook

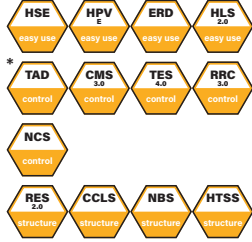
	lbs	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
1600.4	846261	5003	26,3+13,1	28110	cont.	8'4"	11'10"	8'6"	29'10"/35'9"/41'8"
1600.6	831072	5003	26,3+13,1	30200	cont.	8'4"	11'10"	8'6"	29'10"/35'9"/41'8"
1600.8	821669	5003	26,3+13,1	31660	cont.	8'4"	11'10"	8'6"	29'10"/35'9"/41'8"
1600.8J7	821669	5003	26,3+13,1	35190	cont.	8'4"	11'10"	9'6"	29'10"/35'9"/41'8"
1600.9	788563	5003	26,3+13,1	32320	cont.	8'4"	11'10"	8'6"	29'10"/35'9"/41'8"
1600.9J7	788563	5003	26,3+13,1	35850	cont.	8'4"	11'10"	9'6"	29'10"/35'9"/41'8"

TOP RANGE MODEL 2000



standard

- easy use
- control
- structure



optional

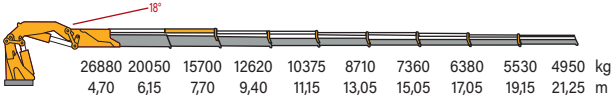
- control



*E.C. market specific equipment

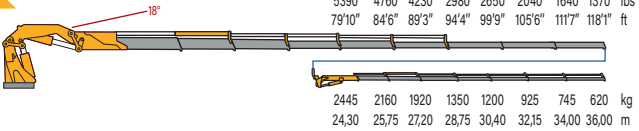
2000.9

59270 44210 34620 27825 22875 19205 16230 14070 12190 10915 lbs
15'3" 20'2" 25'3" 30'10" 36'7" 42'10" 49'5" 55'11" 62'10" 69'9" ft



2000.9J7

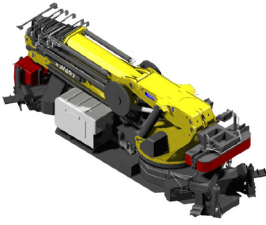
5390 4760 4230 2980 2650 2040 1640 1370 lbs
79'10" 84'6" 89'3" 94'4" 99'9" 105'6" 111'7" 118'1" ft



	kN.m	bar	l/min	kg	°	mm	mm	mm
2000.9	1239	345	70	21000	∞	2550	3600	2595
2000.9J7	1239	345	70	22720	∞	2550	3600	2895

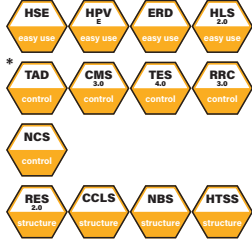
	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc
2000.9	896458	5003	34	46200	∞	8'4"	11'10"	8'6"
2000.9J7	896458	5003	34	50090	∞	8'3"	4'11"	9'6"

TOP RANGE MODEL 3500



standard

- easy use
- control
- structure



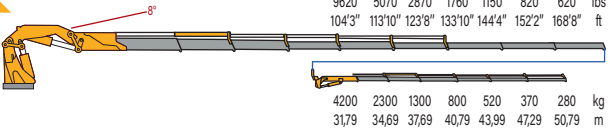
optional

- control

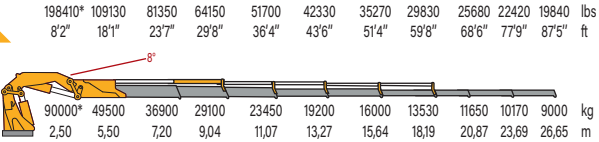


*E.C. market specific equipment

3500.9J6



3500.9



*Theoretical capacity at fixed hook



	kN.m	bar	l/min	kg	°	mm	mm	mm	mm
3500.9	2700	330	100+50		∞				
3500.9J7	2700	330	100+50		∞				

	lbs.ft	psi	gal/min	lbs	°	ft/inc	ft/inc	ft/inc	ft/inc
3500.9	1952910	4785	26,3+13,1		∞				
3500.9J7	1952910	4785	26,3+13,1		∞				

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