

KRONOS

Forest



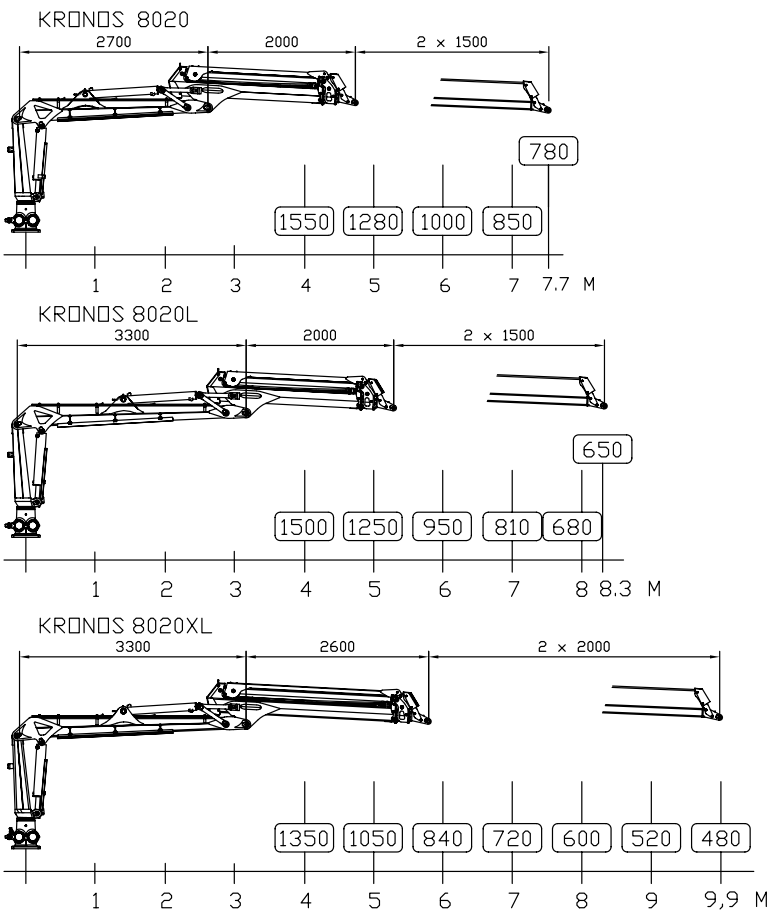
ENG

The **Kronos 8020 series** is available with option of three different boom lengths. This is the most powerful crane in the Kronos range, they are extremely robust and after rigorous testing they have proved their structural superiority.

The 8020 series cranes' lifting and slewing forces are high throughout the whole operating envelope therefore guaranteeing high efficiency. The 8020 series of cranes comes as standard with a powerful grapple and rotator.

Two particular sectors have been especially focused on when developing the Kronos 8020 series of cranes: durability and ergonomics. The booms have passed detailed FEM analyses and demonstrated their enormous strength. The slewing and lifting dampers soften the movements and prevent sharp hydraulic pressure peaks in loading, therefore extending the crane's service life. The telescopic extension cylinder with hydraulic end-dampening and swing damper for the grapple put final touches to the unit.

Kronos 8020 is suitable for mounting on large tractors and forestry trailers, e.g. Kronos 140 4WDM and 160 4WDM.



Kronos 8020L + Valtra N123



Kronos 8020 L



Kronos 8020



Kronos 8020

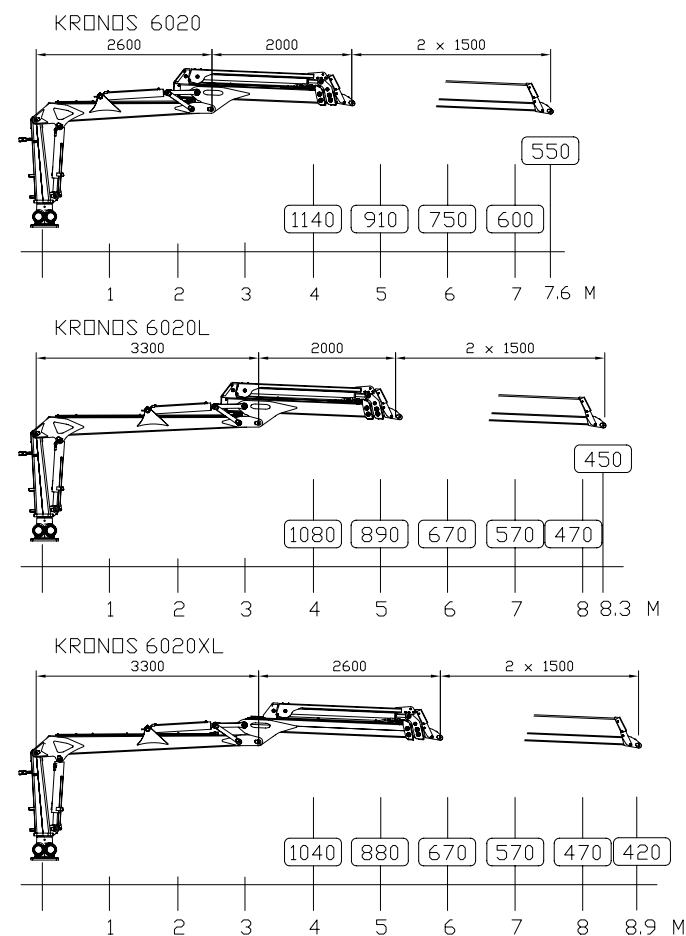
KRONOS 6020 is designed in accordance with the wishes of professional users. The sturdy crane booms and high quality hydraulic components guarantee many working hours for the years ahead.

Hydraulic hoses are well shielded inside a protective cover. The hoses are dimensioned for large amounts of oil flow to the grapple. This enables the efficient use of various felling and energy grapples without further modifications.

Kronos 6020 is suitable for mounting onto large tractors and forestry trailers, for example to the Kronos 140 4WDM & 160 4WDM.

Kronos 6020's powerful slewing device, short lift boom, and strong chain-transmission-based double extensions, together make transportation of heavy loads extremely accurate and fast.

There are various alternative control systems for the crane. For the professional contractor a hydraulic or electrical remote control system is an advisable alternative. The greatest output in professional use can be reached by a fully electronic CAN bus controlled valve. The system enables, among other things, individual speed control of all the motions.



Kronos 6020 L



Kronos 6020 L



Kronos 6020



Kronos 6020 L

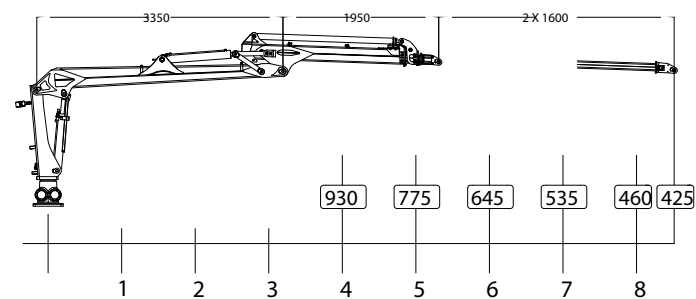
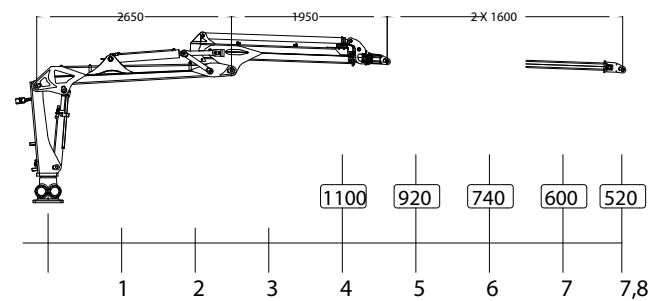
Kronos 6020

The new Kronos 5020 series is a new addition to the already comprehensive range of Kronos forestry machinery. The starting point for the design of the machine was a desire to develop a loader that had a chassis that was both durable and light. We achieved both of these objectives and we are now able to proudly present the perfect loader for any tractor use. Two basic models are available, which we can tailor to meet the needs of our customers.

The loader's booms have been completely redesigned, with the hoses leading to the grapple being securely housed within the boom itself. A significant weight decrease has also been achieved with the internalization of the hoses, adding to the efficiency of the loader. Two basic models are available, which we can tailor to meet the needs of our customers.

This model with the 2,7m main makes it a very versatile tractor-mounted loader for fitting direct to the tractor (via a Jake Mounting kit) Thanks to compact 1st main boom the use with an energy grapple is very efficient also making the loader very agile in first thinnings.

The 5020L loader is ideal for mounting on a trailer. The long main boom enables good reach for timber in most situations and enables you to stack high loads on a trailer.



Kronos 5020L + 120H



Kronos 5020



Kronos 5020



Kronos 5020

Kronos 5020

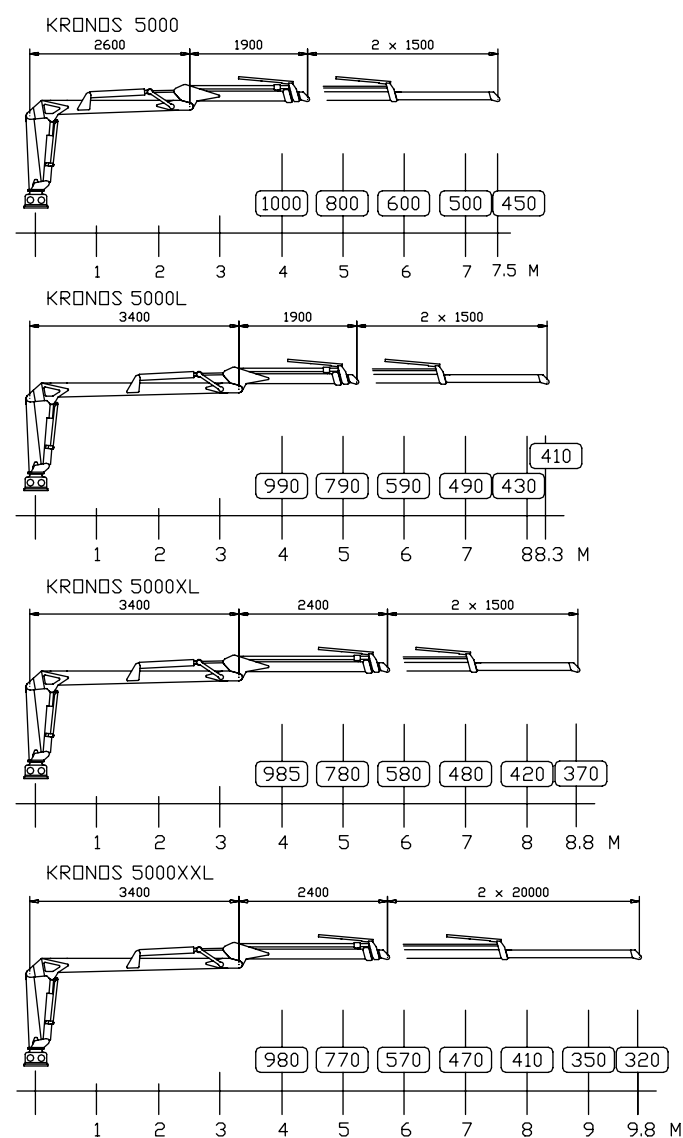
The Classic Professional's Crane

Kronos 5000 has acquired a vast and faithful body of end users. Its high lifting force, optimised motion paths and short main boom make the 5000 an extremely agile and productive crane for thinning operations.

With two hydraulic extensions, it has a maximum reach of 7.5 metres, despite the crane's short main boom (2.6 metres).

The crane has been designed using the highest quality materials, well dimensioned bearings and cylinders developed for intensive work. High quality hoses ensure little downtime and trouble free operations.

Models L = 8,3 m, XL = 8,8 m and XXL = 9,8 m are recommended for purposes requiring long reach.



Kronos 5000 XXL



Kronos 5000, Valtra N92, harvester head



Kronos 5000, Eschlböck Biber 80 chipper



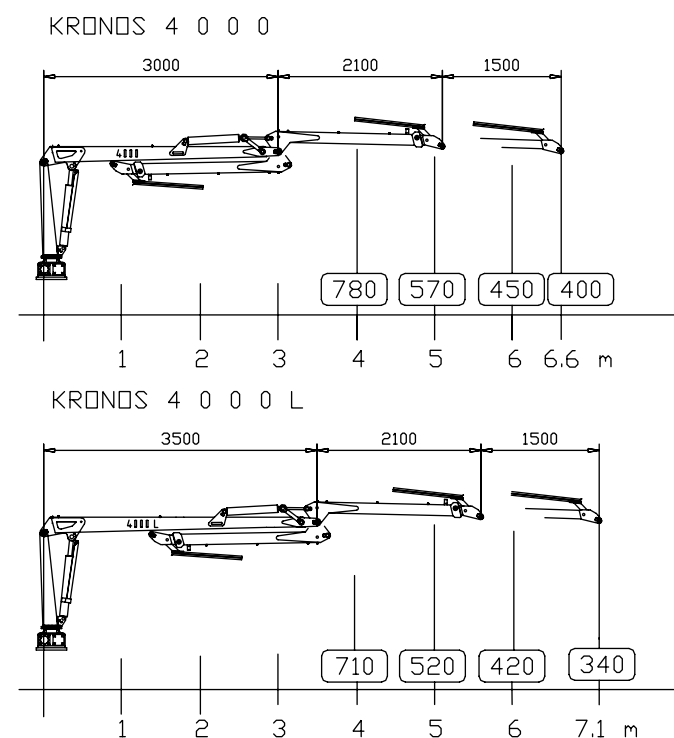
Kronos 5000 XXL

Kronos 5000

The Kronos 4000 has been developed for users who know that quality always pays in the end. Providing the best alternative to a Kronos trailer and/or an agricultural tractor, where the crane makes the difference.

The Kronos 4000 and its unique design solutions are inspired by our larger cranes. It is therefore also based on what the professional demands with quality down to the finest detail: bearings, hosing, hydraulics and high quality materials provide the perfect complement!

The Kronos 4000 is available with max. reach: 6,6 m or 7,1 m with either two or four turning cylinders. Various valve options can be supplied.



Kronos 4000L and trailer 100H (tyres 400/60-15,5/14)



Kronos 4000L, vagn 100H



Kronos 4000 and Eschlböck chipper



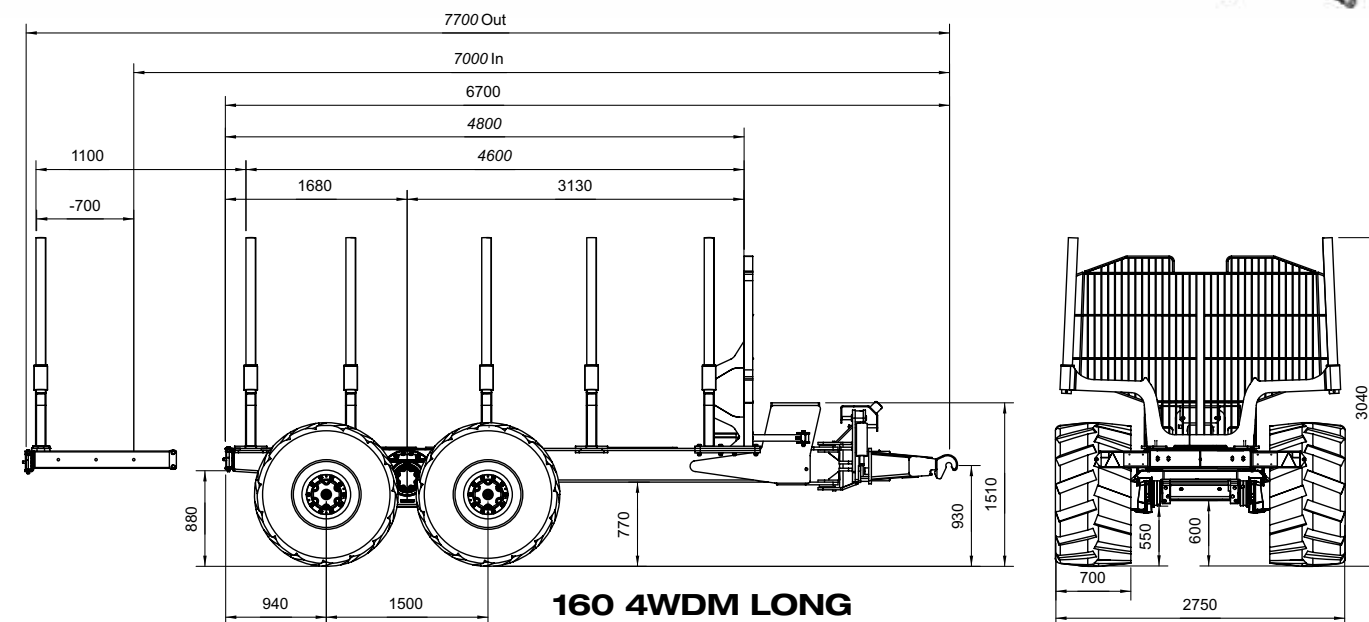
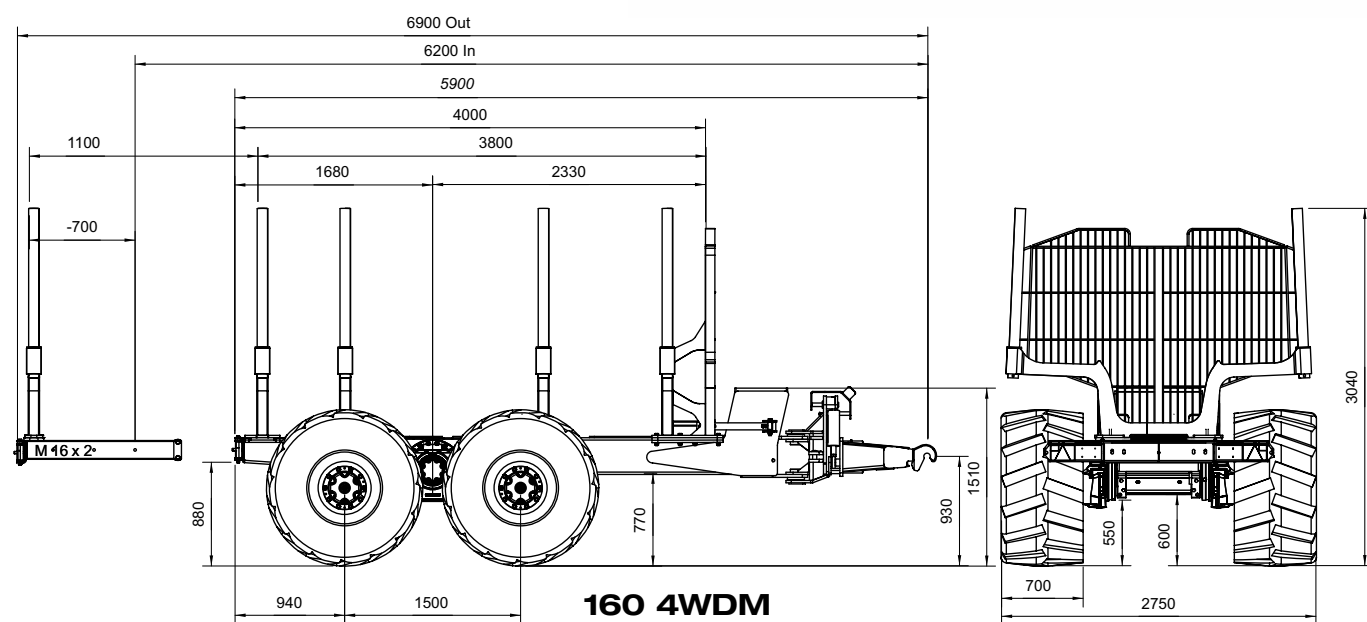
Kronos 4000 and Pezzolato chipper



Kronos 4000 with Jake mounting kit



Kronos 160 4WDM



The **KRONOS 140 4WDM/160 4WDM** forestry trailers have a sturdy set of bogey axles based entirely on mechanical transmission, with the power generated by the drive shaft being transmitted via a drive gear and a differential gear system to the bogie housings on both sides of the machine.

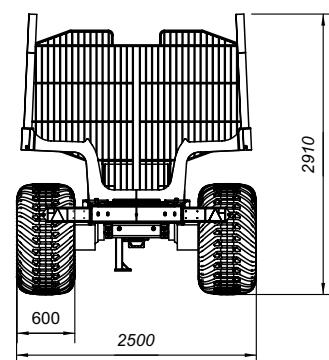
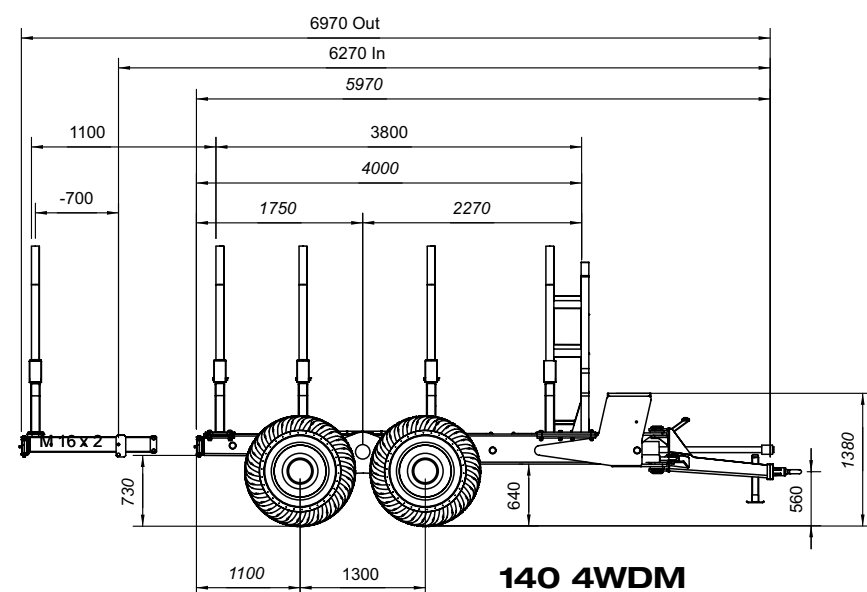
The 140 trailer comes with either an articulated drawbar or with a Y-drawbar. The Y-drawbar has an atomized frame lock which makes support legs unnecessary. With this drawbar, the trailer follows tractor path automatically. It comes also with frame steering cylinders that improve maneuverability in difficult situations. Normally these cylinders are in floating. The 160 trailer have always the Y-drawbar. Road safety is guaranteed via multiple-disc brakes.

A standard feature of the drive gear is its differential gear lock, which enables all four wheels to pull at the same speed. The trailer's set of drive shafts is provided with an overload clutch to deal with inadvertent overloading. The gear ratio between the tractor and the trailer has been adapted in the trailer's front-end gearbox, the gear ratio of the trailer being variable by changing a pair of gear wheels or the entire gearbox.

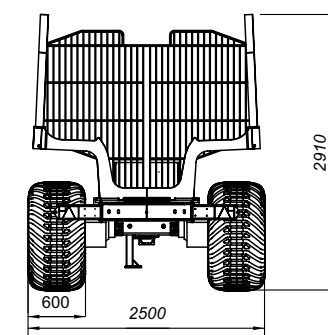
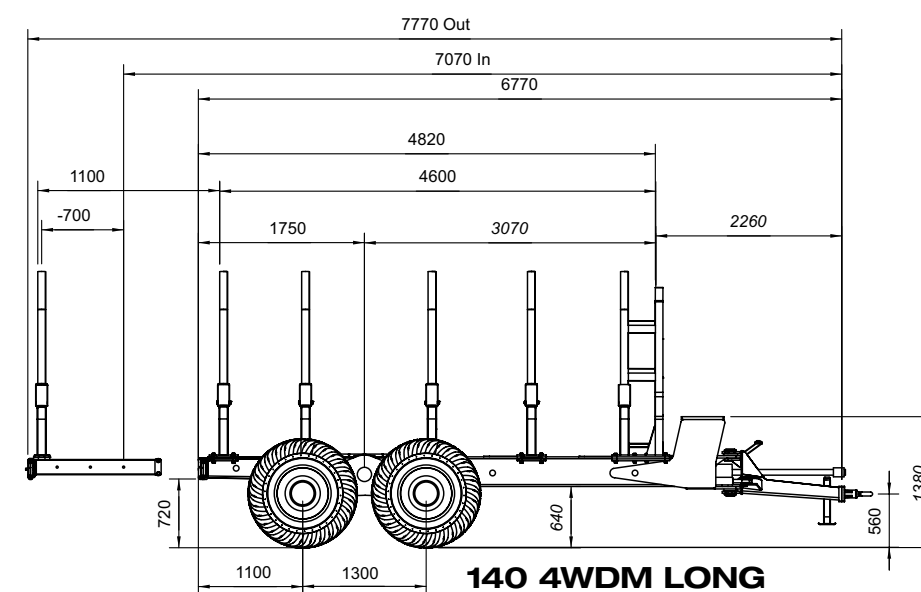
When the trailer is being pulled with the power transmission off, the set of drive shafts is disengaged, freeing the front-end gearbox from unnecessary rotation, and thus making the trailer easier to pull.



Y-tractor axle drawbar with hydraulic locking and frame steering (with 2 cylinders)



Kronos 140 4WDM





A good forestry trailer is the sum of many factors. Having listened to its customers, Kronos has developed a new model called Kronos 150 H / 4WD. Product development gave birth to a robust trailer with a frame based on enclosure-beam structure. The trailer is structurally capable of carrying a heavy-duty loader along with a large load of timber. Wide tyres, powerful hydraulic drawbar steering using two cylinders and hydraulically driven wheels (in 4WD model) ensure good operation even in difficult terrain.

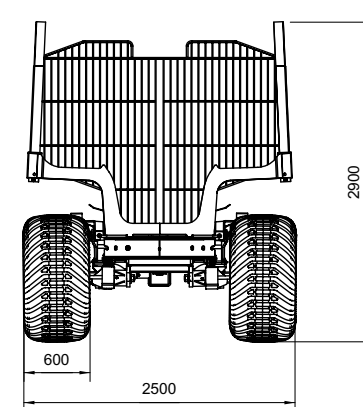
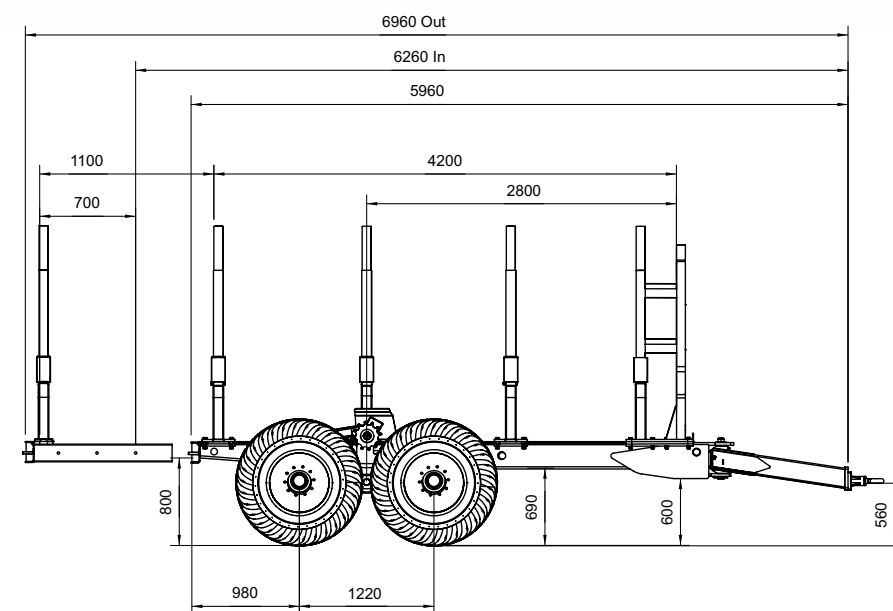
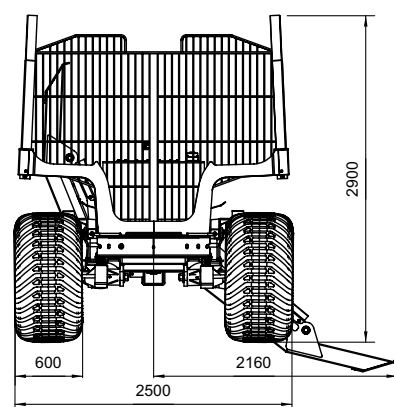
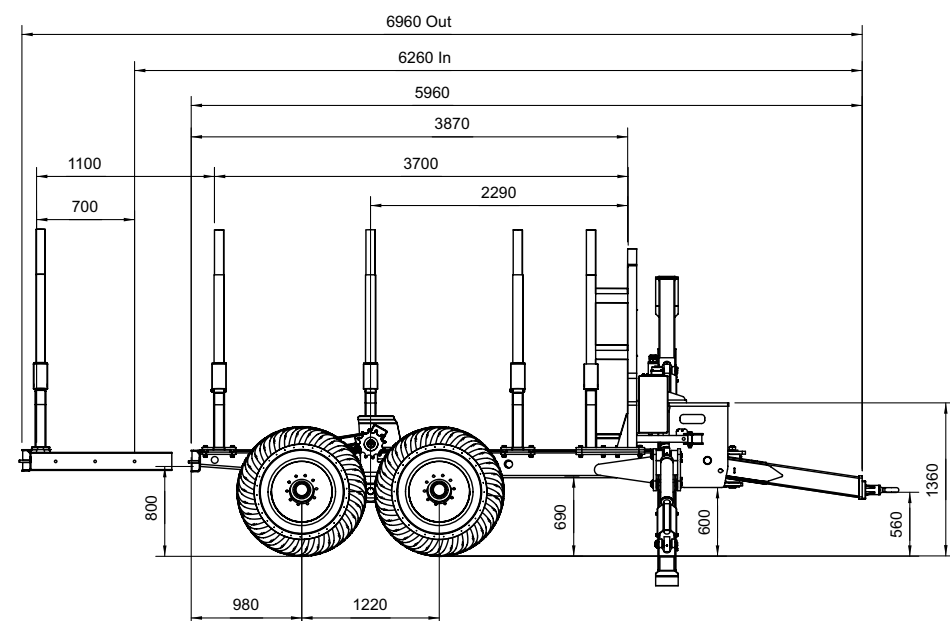
In the 4WD model the power is transmitted to the wheels by means of rollers forced against the tyres. The hydraulic motors with the rollers get the oil flow from the tractor hydraulic output or from a separate pump unit. This extra traction is used only in difficult situations.

The operator just switches the traction on from using a control valve and switches it off when the tractor reaches a higher speed and is able to pull the trailer under its own power. In most situations, a tractive force of 1600 kp is enough to prevent the unit from getting stuck. The design of the roller keeps it clean and ensures a very good grip to the tyres. The large load space provides the trailer with real capacity even for long forwarding distances. Safety when driving along roads is ensured by powerful brakes and high quality lights and reflectors. Kronos 150 H trailers are well equipped to meet the demands of a variety of end users. The trailer is also available without the base for a loader.

Tractive force 1600 kp with an oil pressure of 175 185 bar

Speed 3 km/h with an oil flow of 60 litres/min.

Speed 4 km/h with an oil flow of 80 litres/min.



Kronos 150/150 4WD





Models 100 H, 120 H, 100 4WD, and 120 4WD are dualbeamed. This has made it possible to keep the trailer frame structure low and the trailer's centre of gravity low also when carrying a load. The sturdy structure of the trailers is able to accommodate even the heavier crane models.

The trailers can be customised to fulfil the individual needs of users. Kronos forestry trailers include various crane mounting options and hydraulic systems. The trailers can be provided with extra bolsters, tractor mountings, and brake systems, which can be adapted to meet the varying requirements of different countries.

The 4WD models provided with hydraulic transmission. The power is transmitted to the tyres by means of rollers forced against the tyres by means of hydraulic cylinders. The wheels can be provided with separate brakes. Their tractive force is approx. 1600 kp.



120 H trailer, tyres 550/45-22,5 crane 6020

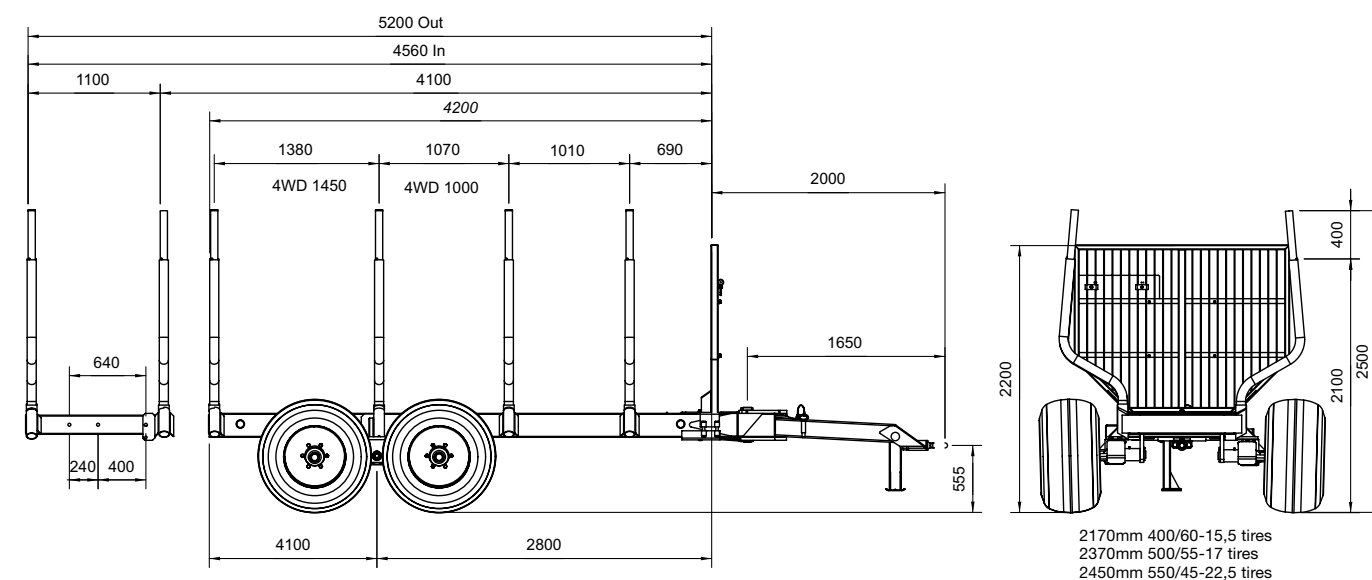


120 H trailer, tyres 550/45-22,5



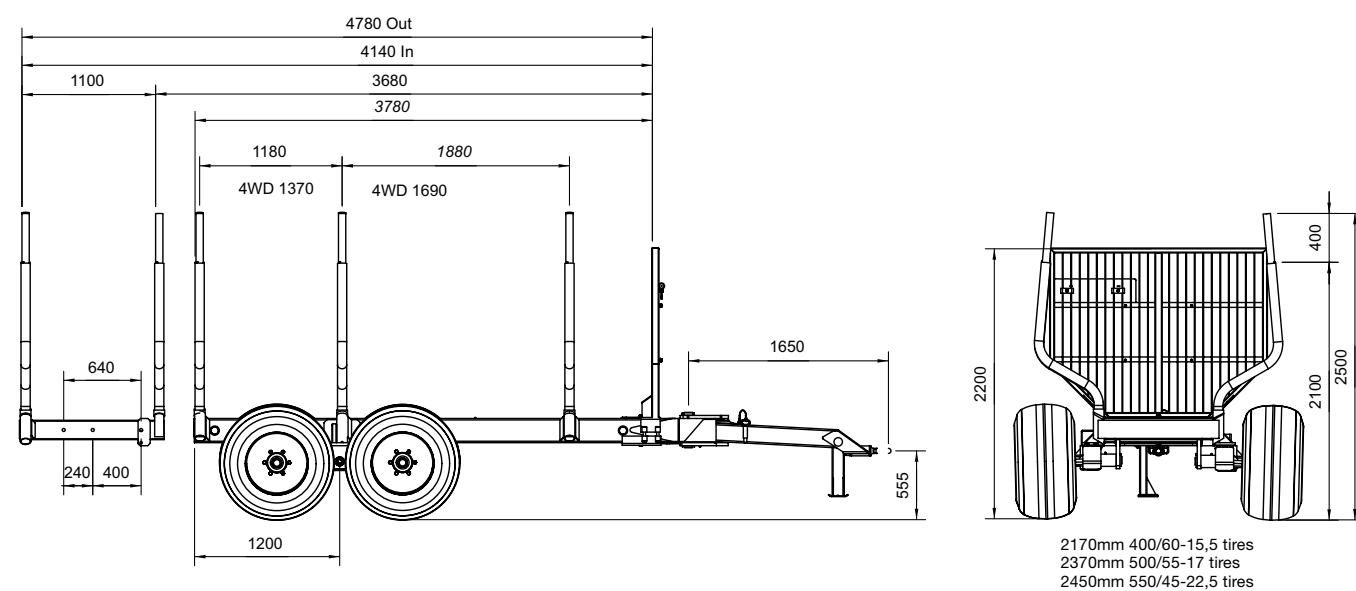
120 4WD trailer,
tyres 550/45-22,5
crane 6020

120 H, 120 4WD





100 4WD trailer, tyres 400/60-15,5, crane 4000



100 trailer, tyres 400/60-15,5, crane 4000



Kronos 6020L with Kronos 160H chain mulcher



Kronos 6020 and harvester head

Farmers harvesting their own timber harvest in their woodlands are common in the Scandinavian countries. Using specialized logging attachments on modified farm tractors, they often log during the winter when their normal farming operations are suspended. The smaller, lighter farm tractor may be able to operate effectively on partial cuts in dense timber stands where larger skidders or forwarders might possibly cause residual stand damage or soil compaction. A farm tractor logging system, with its relatively low capital investment and operating costs, may be an effective way to meet other non-timber landowner objectives that require logging small areas infrequently, like clearing wildlife plots or opening up recreation areas. Finally, farm tractor logging can be a very effective system for producing firewood from the farm woodland for personal consumption or commercial sale.

Kronos 6020 adapts to the user's needs in various operating situations. The crane's power and optimised boom dimensions make it an excellent crane also for logging purposes. Well-shielded hydraulic hoses and the preciseness of crane controls ensure that the operator can focus fully on getting the job done.



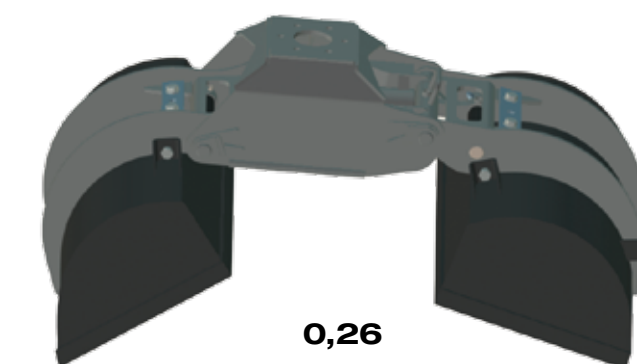
Front axle locking unit set for Valtra tractors without air-suspended axle. Set consists of two cylinders, hoses and valve.



Radio controlled hydraulic winch. 1400 kp, wire: Ø 6 mm, length 35 m




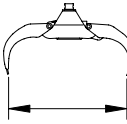

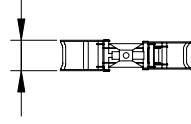
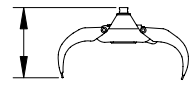
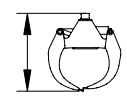
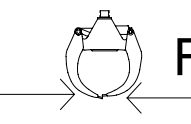
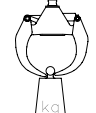


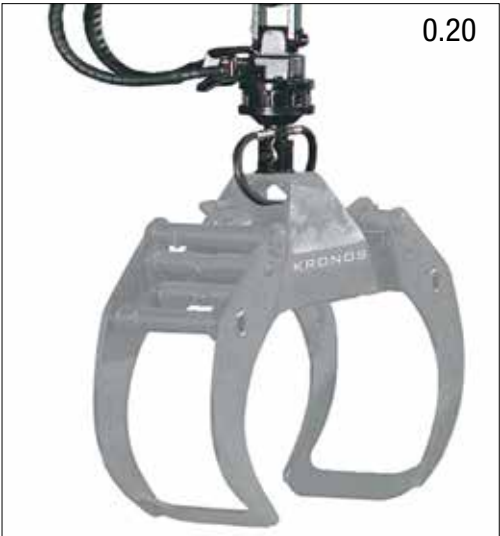
0,2



0,26

Grapples

Modell	0.20	0.26	0.26
 max	18 Mpa	17,5 Mpa	24
	90 kg	140 kg	180 kg
	0,20 m²	0,26 m²	0,26 m²
	1250 mm	1450 mm	1525 mm
	80 mm	85 mm	90 mm
	320 mm	340 mm	430 mm
	750 mm	850 mm	760 mm
	470 mm	550 mm	867 mm
 F	6800N	10000N	12100N
 max	2000 kg	2500 kg	3500 kg



Energy wood grapples
0,16 m² and 0,21m²



Nordhydraulic 2-lever control valve



Hydraulic pilot-operated Joy stick control



MINI -Joystick



Danfoss - Electric remote control, vertical PVRE joysticks

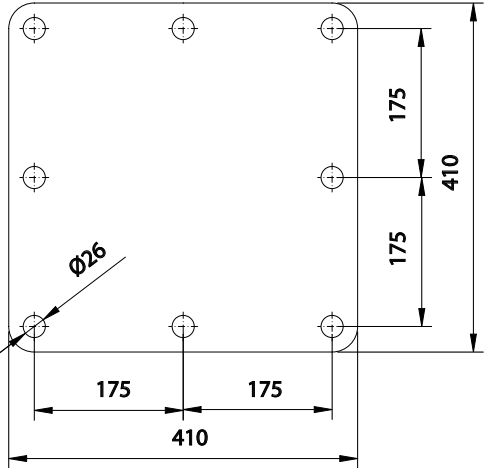
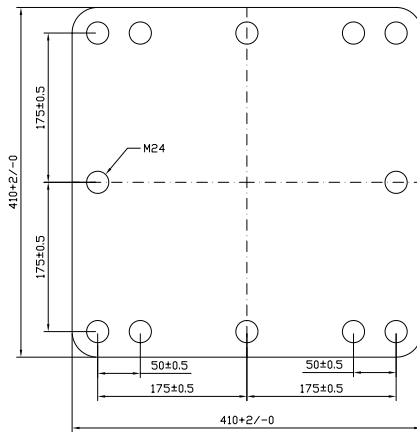


Danfoss - Profi joysticks with EHF speed adjustment

Model 8020

Bottom measuring of slewing device

Model 4000, 5000, 6020



Mounting kits for tractor frame (Jake)



Additional hydraulic units (front pump-units)

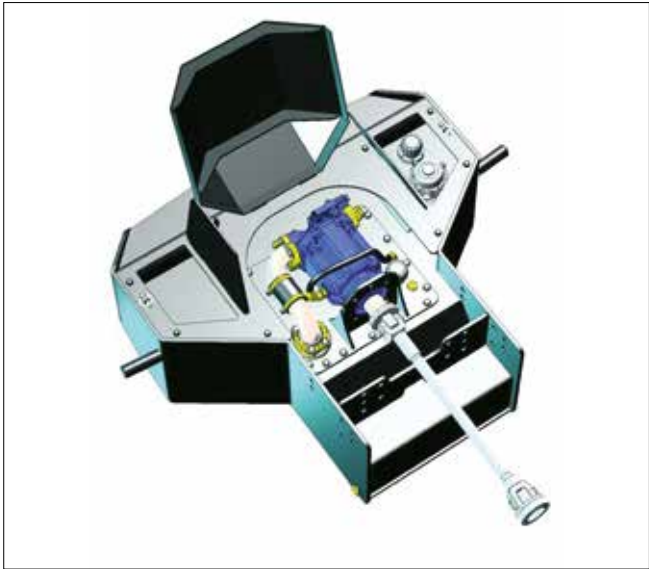
Front pump equipment is specifically designed for use in forest. Robust construction, good protection and effective filtering will give trouble-free operation in the woods. We only use the best quality piston load sensing pumps to give reliable long-life operation. Use of load sensing pumps ensures better fuel economy, high oil flow and full pressure is reached with very low engine speeds.



Valtra N3-series 150 I, front loaders are possible



Valtra N1 & N2-series 160 I



Valtra N1 & N2-series 160 I



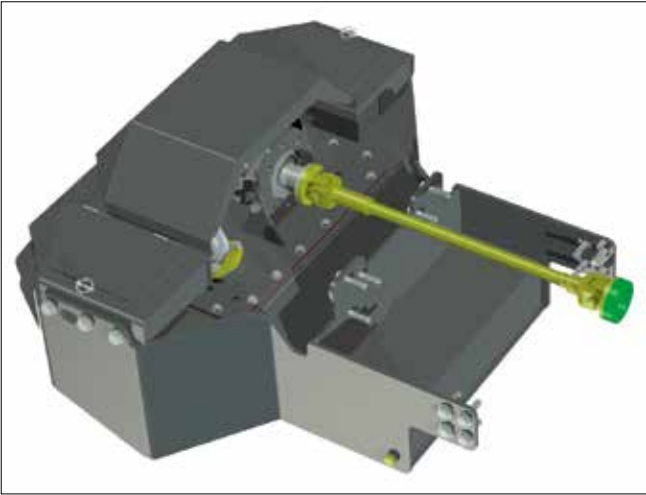
Valtra N1 & N2-series 160 I



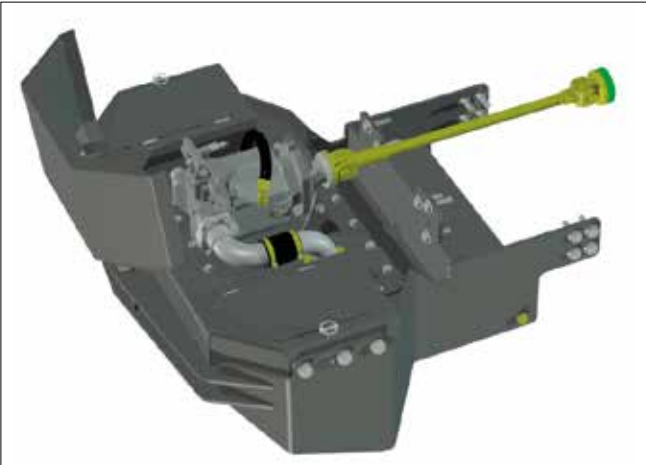
Valtra N1 & N2-series 110 I, front loaders are possible



Valtra N3-serie 150 I, front loaders are possible



Valtra T&M-series 150 I



Valtra T&M-series 150 I



Installation of pump



Oil cooler. In warm conditions, operating a harvester head or a felling grapple, is an oil cooler needed



Universal pump unit for tractor 3-point (back or front)

Model (series):	T & M	T & M	N1 & N2	N1 & N2	N1 & N2	N1 & N2	N3	N3	Universal pump	Universal pump
Volume of the tank	150	150	110	110	160	160	150	150	100	150
Variable displacement (LS) pump	71	110	71	80	71	110	71	110	71	110
Pump output at engine speed:										
1000 rpm	71	110	71	80	71	110	71	110		
2200 rpm	156	242	156	176	156	242	156	242		
Weight tank incl. oil	480	480	390	390	600	600	430	430	420	550

Pump unit includes: tank, pump, transmission shaft and fixing accessories

Technical specifications trailers

Model	100H	100 4WD	120H	120 4WD		150	150 4WD	140 4WDM	160 4WDM
Weight, kg	1490	1850	1690	2050		4100-4900	4100-4900	5400	6600
Carrying capacity, kg	10000	10000	12000	12000		15000	15000	12000	13000
Total weight permitted on bogie with max speed 30 km/h, kg								14000	16000
Cross-section area of load platform, m²	2.1	2.1	2.9	2.9		3,2	3,2	3,2	3,35
Overall length, mm	5700	5700	6100	6100		6100	6100	6150	5900
Length of the load area, mm	3800	3800	4200	4200		4000	4000	4000	4000
Bolsters: Fixed / Movable	3/0	3/0	4/0	4/0		1/3	1/3	1/3	4/0
Load supports	6	6	8	8		8	8	8	8
Bogie wheelbase, mm	1040	900	1040	1040		1220	1220	1300	1500
Bogie movement range, degrees	±20	±20	±20	±20		±20	±20	±20	±20
Push force of trailer, kN (kp) hydr.driven*185 bar		16 (1600)*		16 (1600)*		16 (1600)*	16 (1600)*	75 (7500)	90 (9500)
Ground clearance, at bogie, mm	~ 580	~ 580	~ 610	~ 610		~ 600	~ 600	~ 550	~ 660
Ground clearance at rear of frame, mm	~ 580	~ 580	~ 610	~ 610		~ 600	~ 600	~ 700	~ 840
Tyres:									
400 / 60 - 15,5 / 14	S	S							
500/55-17 / 12 ELS	0	0	S	S					
550/45-22,5 / 12 ELS	0	0	0	0					
600/50-22.5 / 12 ELS L-1 TL						S	S	S	
600/50-22.5 / 16 TRS L-2 SF (with steel breaker)								0	
710/45x22,5 Nokian Forest King (with steel breaker)								0	
700/50-26,5 / 16 TRS SFS (with steel breaker)									S
600/55-26,5 / 16 TRS L-2 SF (with steel breaker)									0
Recommended crane	4000	4000	4000-6020	4000-6020		5000-8020	5000-8020	5000-8020	5000-8020
Equipment:									
Front grill	S	S	S	S		S	S	S	S
Hydr.adjustable front grill and bolster	0	0	0	0		0	0	0	0
Multiple disc brakes								S	S
Operating brake (hydr.drum brakes)	0	0	0	0		S	S		
Parking brake	0	0	0	0		0	0	0	0
Differential locking system								S	S
Mechanical clutch and lock electric operated from the control unit								S	S
Turning angle of the hydraulic drawbar, degrees	±35	±35	±35	±35		±33	±33	±45	±45
Y-drawbar with frame steering								0	S
Telescopic rear frame-extension with one bolster	0	0	0	0		0	0	0	0

Equipment: S=Standard, 0= optional

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All technical dates unbinding

Crane attaching

Crane base A01 incl support legs, for tractor 3-point and trailer
Nr. 9777100
Fit for Kronos 4000/5000 crane, Kronos 100-120 trailer.

Crane base W03 incl. support legs and oil tank 90 l
Nr. 9820000
Fit for Kronos 4000/5000 crane, Kronos 100-120 trailer

Crane base W04 incl. support legs
Nr. 9837001
Fit for Kronos 4000/6020 crane, Kronos 100- 120 trailer



Technical specifications cranes

Model	4000	4000 L	5000	5000 L	5000 XL	5000 XXL		5000-1/60	5000-1/68	5000-1/73	5000-1/78	5020	5020 L	6020	6020 L	6020 XL	8020	8020 L	8020 XL
Attaching	Flange	Flange	Flange	Flange	Flange	Flange		Flange	Flange	Flange	Flange	Flange	Flange	Flange	Flange	Flange	Flange	Flange	Flange
Max outreach, m	6,6	7,1	7,50	8,30	8,80	9,80		6,00	6,80	7,30	7,80	7,80	8,50	7,60	8,30	8,90	7,70	8,30	9,90
Lenght of main boom, m	3,00	3,50	2,60	3,40	3,40	3,40		2,60	3,40	3,40	3,40	3,40	3,40	2,60	3,30	3,30	2,70	3,30	3,30
Lenght of extension boom, m	1,50	1,50	2x1,5	2x1,5	2x1,5	2x2,0		1 x 1,5	1 x 1,5	1 x 1,5	1 x 2,0	1 x 2,0	1 x 2,0	2 x 1,5	2 x 1,5	2 x 1,5	2 x 1,5	2 x 1,5	2 x 2,0
Height, m	1,70	1,70	1,80	1,80	1,80	1,80		1,80	1,80	1,80	1,80	1,80	1,80	1,90	1,90	1,90	1,95	1,95	1,95
Width, m	1,48	1,48	1,25	1,25	1,25	1,25		1,25	1,25	1,25	1,25	1,25	1,25	1,25	1,25	1,25	1,25	1,25	1,25
Lifting moment, brutto, kNm	39	39	50	50	50	50		50	50	50	50	62	62	72	72	72	82	82	82
Allowable load, kg/4m (without grapple and rotator)	760	710	1000	990	985	982		1000	990	985	982	1100	930	1140	1080	1040	1550	1500	1350
Turning angle of boom, degrees	390	390	400	400	400	400		400	400	400	400	400	400	400	400	400	360	360	360
Turning moment, brutto, kNm	7,9 (*15,3)	7,9 (*15,3)	18	18	18	18		18	18	18	18	18	18	18	18	18	22	22	22
Lubrication of turning device	oil	oil	oil	oil	oil	oil		oil	oil	oil	oil	oil	oil	oil	oil	oil	oil	oil	oil
Cylinders in turning device, pcs	2 (*4)	2 (*4)	4	4	4	4		4	4	4	4	4	4	4	4	4	4	4	4
Turning angle of rotator	∞	∞	∞	∞	∞	∞		∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞
Turning moment of rotator, Nm	900	900	900	900	900	900		900	900	900	900			1000	1000	1000	1600	1600	1600
Grapple size, m²	0,20	0,20	0,26	0,26	0,26	0,26		0,26	0,26	0,26	0,26	0,26	0,26	0,26	0,26	0,26	0,27	0,27	0,27
Max opening of grapple, mm	1250	1250	1450	1450	1450	1450		1450	1450	1450	1450	1450	1450	1450	1450	1450	1475	1475	1475
Minimum grapple diameter, mm	80	80	85	85	85	85		85	85	85	85	85	85	85	85	85	75	75	75
Width of grapple, mm	280/320	280/320	290/340	290/340	290/340	290/340		290/340	290/340	290/340	290/340	290/340	290/340	290/340	290/340	290/340	345/425	345/425	345/425
Weight, grapple + rotator, kg	110	110	170	170	170	170		170	170	170	170	170	170	175	175	175	250	250	250
Weight, basic crane, kg	660	670	970	1040	1050	1100		900	945	955	990	990	990	1200	1240	1250	1240	1280	1400
Working pressure, bar	175	175	175	175	175	175		175	175	175	175	175	175	175	175	175	210	210	210
Recommended pump output, l/min	40-80	40-80	40-80	40-80	40-80	40-80		40-80	40-80	40-80	40-80	60-100	60-100	60-100	60-100	60-100	70-100	70-100	70-100
Attaching																			
Trailer																			
- Model of crane base	A01, W03, W04	A01, W03, W04	W03, W04	W03, W04	W03, W04	W03, W04		W03, W04	W03, W04	W03, W04	W03, W04	W03, W04	W03, W04	W04	W04	W04	125-160	125-160	125-160
To tractor, with universal crane base (3-p link)																			
- Model of crane base	A01	A01																	
- Tractor with chassis brackets	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0
Equipment																			
Swing damper	S	S	S	S	S	S		S	S	S	S	S	S	S	S	S	S	S	S
Damper	0	0	0	0	0	0		0	0	0	0	0	0	S	S	S	S	S	S
Hydr. Winch	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0
Service stair & anti-slip device	#	#	S	S	S	S		S	S	S	S	S	S	S	S	S	S	S	S

Equipment: S=Standard, 0= optional
Turning moment for models 4000 and 4000L increases to 15,3 kNm by using additional turning cylinders.
#Attention! Only if the crane is equipped with two extra turning cylinders.



Kronos aims to offer efficient and profitable solutions to its customers as the result of the company's design and production efforts. Kronos designs and manufactures forestry cranes and trailers, forestry harvesters, and various implements for tractors (e.g. hydraulic units, crane accessories, front-axle stabilising units, operating valve units).

Part of the company's production goes to contractors and includes customised products meeting specific needs of individual contractors. The hydraulic components are of the highest standard and we use high-quality Scandinavian steel.

The design and product development implemented is all the result of in-house engineering experts' efforts. We hold customer contacts in great esteem.

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