

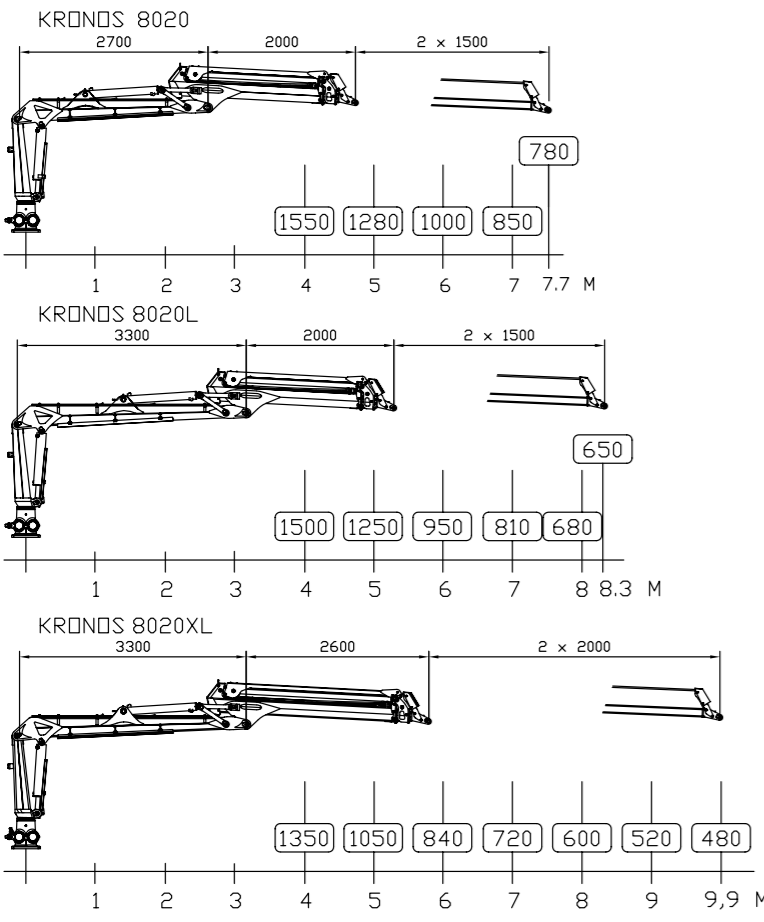
KRONOS

Forest



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 8020 + Valtra N141

Kronos 8020



Kronos 8020 XL

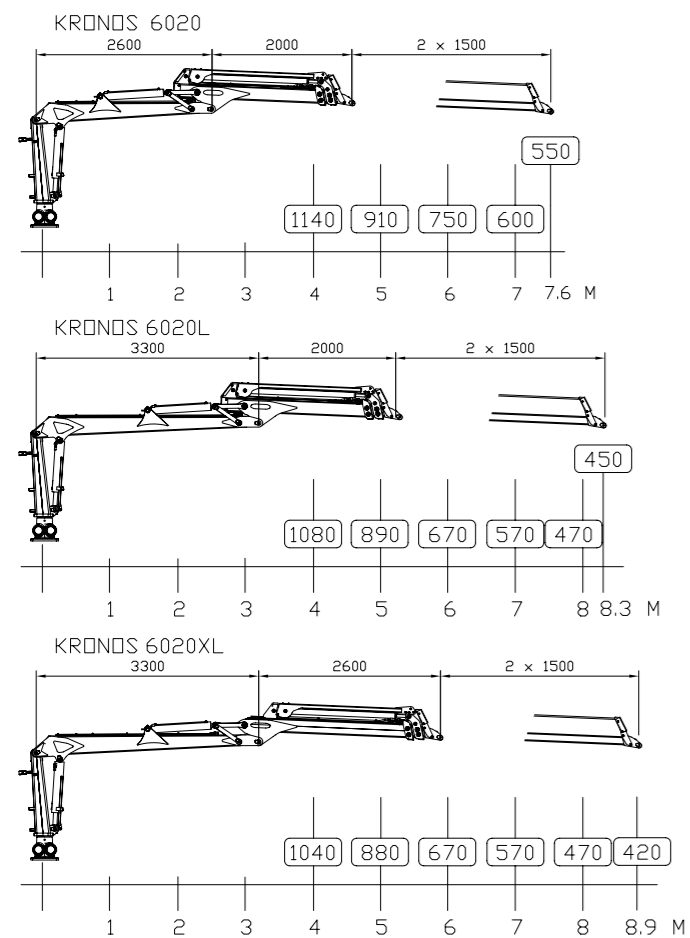


Kronos 8020



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. As a basic choice, a mechanical multi-lever control valve is available, but 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 L



Kronos 6020 L + 125 4WD

Kronos 6020

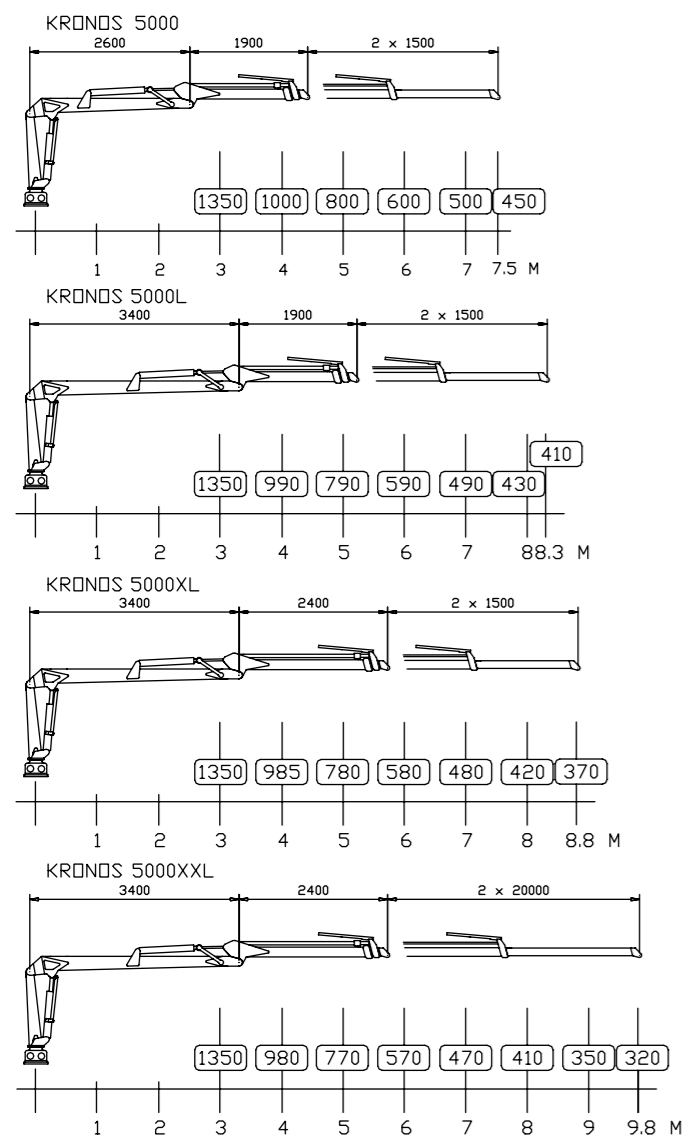
The Classic Professional's Crane

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



Kronos 5000, Valtra N92, Nisula 400 harvester head



Kronos 5000, Eschböck Biber 80 chipper

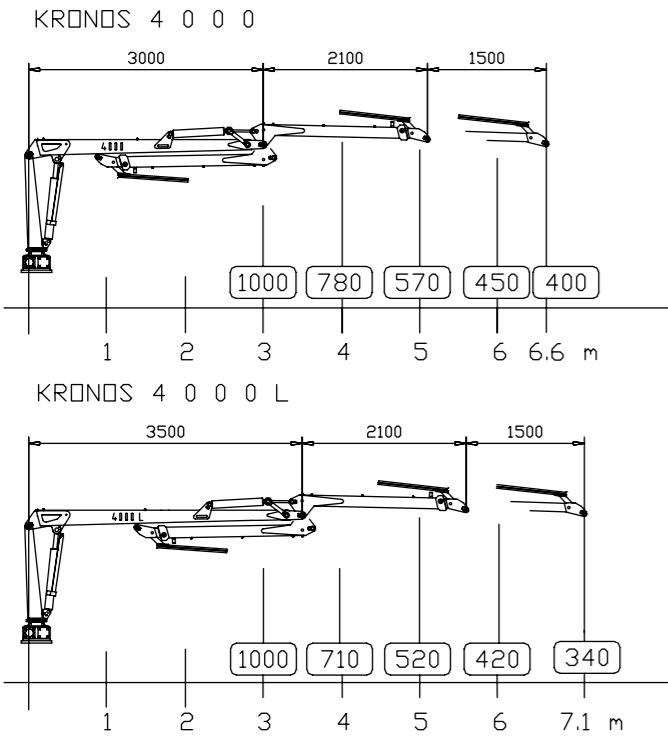


Kronos 5000, Valtra N92, Nisula 400 harvester head

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: 6,5 m or 7 m with either two or four turning cylinders. Various valve options can be supplied.



Kronos 4000



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



Kronos 4000L, trailer 100H and crane base A01



Kronos 4000 and Eschlböck chipper



Kronos 4000 and Pezzolato chipper



Kronos 4000 L and Kronos chain brush cutter

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.

There is no give or disc clutch inside the bogey housing, the gears being in constant contact with each other. Road safety is guaranteed via multiple-disc brakes.

A standard fixture 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.

Kronos 140/160 4WDM



Kronos 160 4WDM, crane 6020



Kronos 160 4WDM



Kronos 140 4WDM



Adjustable front grill and bolster



Control unit for trailer (in tractor cabin)

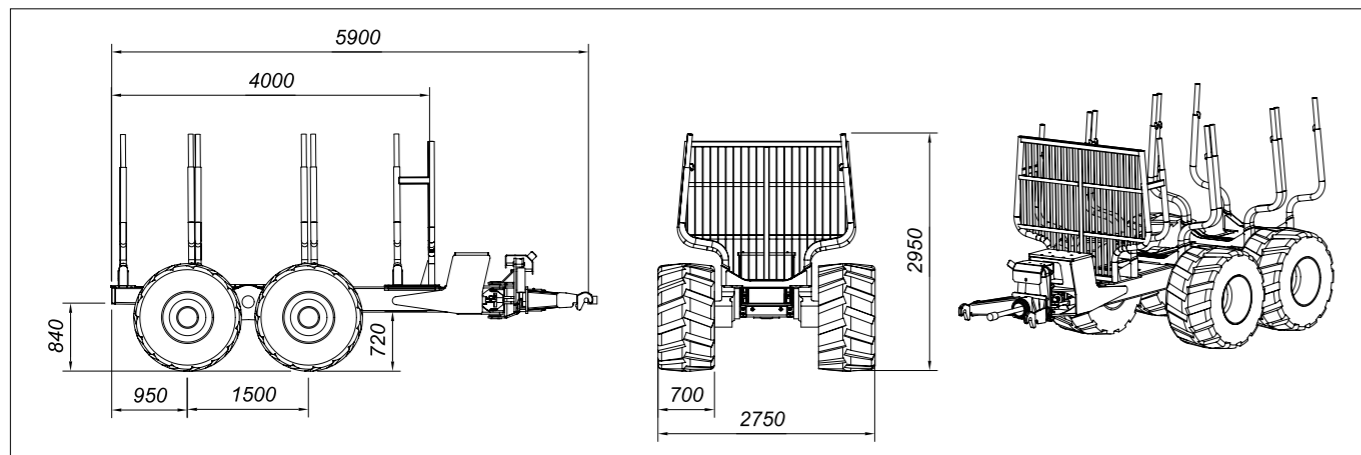
Kronos 140 4WDM



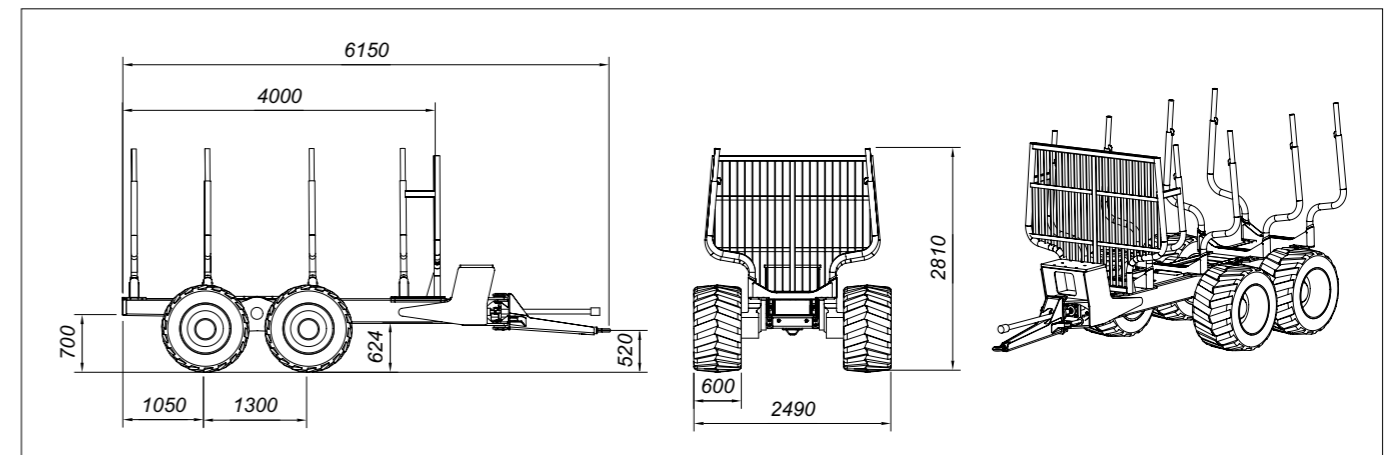
Y-tractor axle drawbar with hydraulic locking and frame steering (with 2 cylinders)

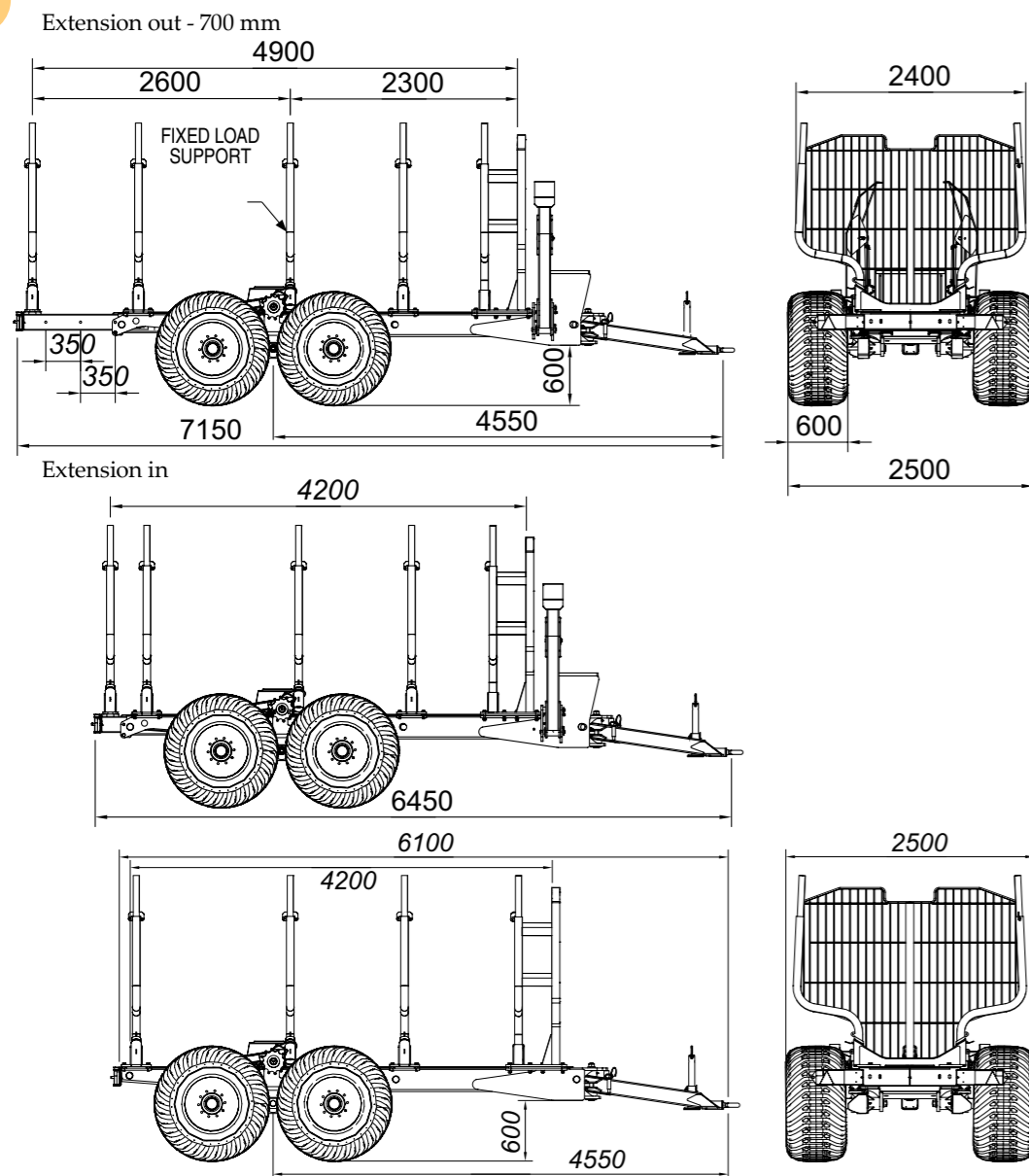
Tyres: Nokian 600/50 - 22.5/12 ELS L-1 TL

Kronos 160



Kronos 140





Kronos 125H

A good forestry trailer is the sum of many factors. Having listened to its customers, Kronos has developed a new model called Kronos 125H. Product development gave birth to a robust trailer with a frame based on an enclosed beam chassis structure. The trailer is easily capable of carrying a heavy-duty forestry crane along with a large load of timber. Wide tyres, powerful hydraulic steering drawbar incorporating two cylinders, combined with 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 hydraulics or from a separate pump unit. This extra traction is used only in difficult situations. The operator just switches the hydraulic drive on by means of 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 means it is self cleaning and ensures a very

good grip with 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 125H trailers are well equipped to meet the demands of a variety of end users. The trailer is also available without the base for a timber crane. Tractive force 1600 kp with an oil pressure of 175 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 125H/125 4WD



Kronos 125 4WD + crane 6020 L



Trailer 125 4WD with frame extension, tyres 600/60 22.5 ELS



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

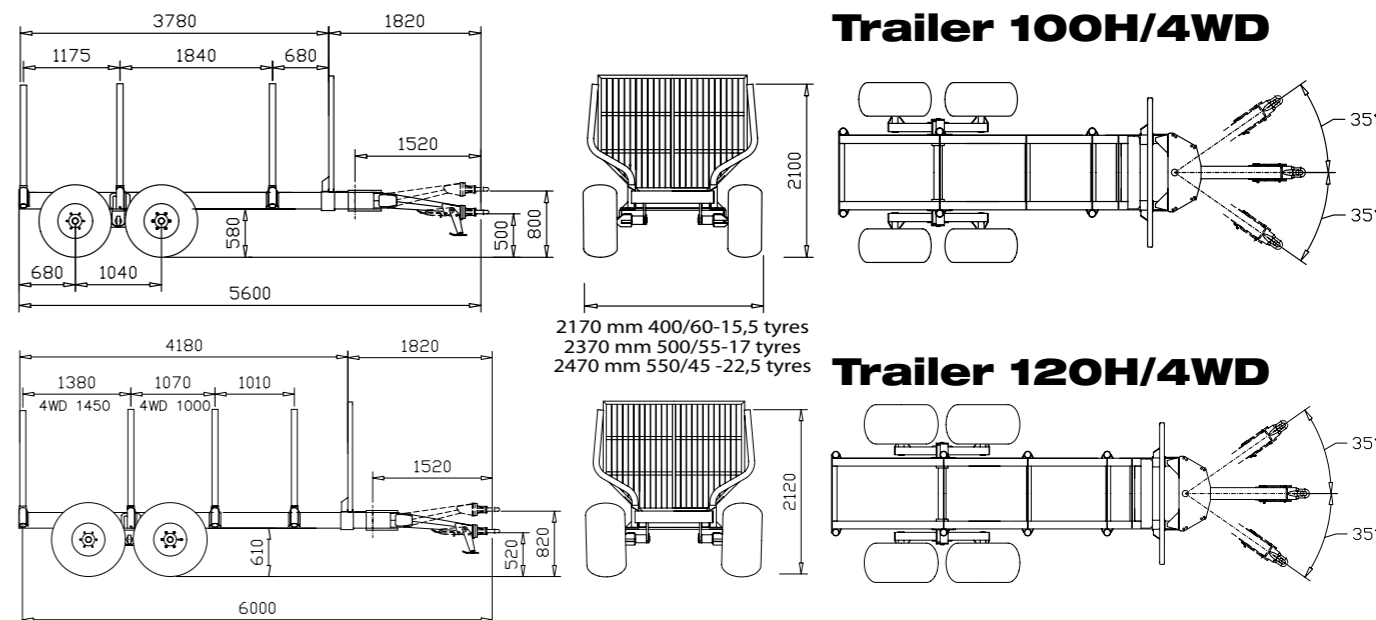


100 4WD trailer, tyres 400/60-15,5, crane 4000

100 H, 120 H, 100 4WD, 120 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 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



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.

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.

Small-scale farm tractor logging may also be used in certain cases to lessen the environmental impact of a timber harvesting operation. 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. Larger, full-time professional loggers with higher capital and operating costs often cannot afford to move their equipment for such small jobs. Finally, farm tractor logging can be a very effective system for producing firewood from the farm woodland for personal consumption or commercial sale.

Grapples

Modell	0.20	0.26	0.27
max	18 Mpa	17,5 Mpa	24
kg	90 kg	140 kg	189 kg
	0,20 m ²	0,26 m ²	0,27 m ²
	1250 mm	1450 mm	1475 mm
	80 mm	85 mm	75 mm
	320 mm	340 mm	425 mm
	750 mm	850 mm	870 mm
	470 mm	550 mm	545 mm
F	6800N	10000N	14500N
max	2000 kg	2500 kg	3000 kg



0.20



0.26



0.27



Energy wood grapples

0,16 m² and 0,21m²



Nordhydraulic 2-lever control valve



Hydraulic pilot-operated Joy stick control



Danfoss - electrical horizontal PVRET joysticks



Danfoss - Electric remote control, vertical PVRE joysticks



Danfoss - Profi joysticks with EHF speed adjustment

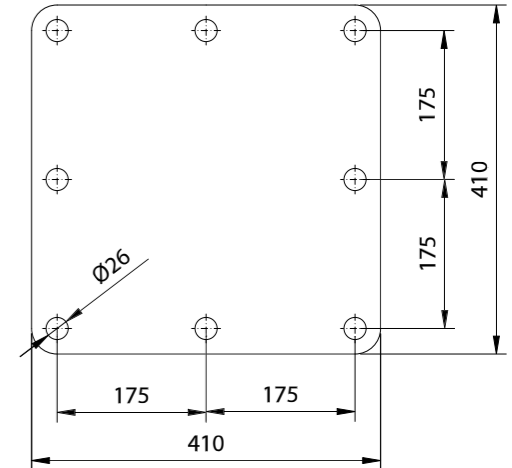
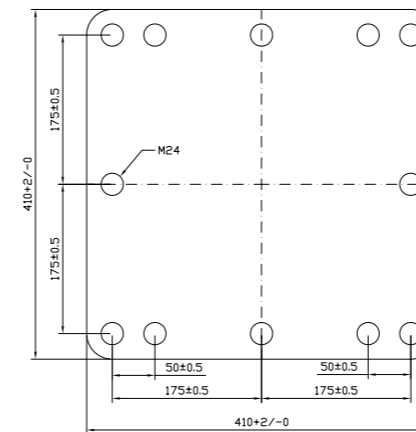


Parker - IQAN-MINI -Joystick

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 N-series 160 l



Valtra T & M - series 150 l



Valtra N-series 160 l



Valtra N-series 160 l

Modell:	T & M series	T & M series	N-series	N-series	Universal pump
Volume of the tank	150 l	150 l	160 l	160 l	100 l
Variable displacement (LS) pump	71 cm ³	105 cm ³	71 cm ³	105 cm ³	71 cm ³
Pump output at engine speed:					
1000 rpm	71 l/min	105 l/min	71 l/min	105 l/min	
2200 rpm	156 l/min	230 l/min	156 l/min	230 l/min	
Weight tank incl. oil	480 kg	480 kg	600 kg	600 kg	420 kg

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



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



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)



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

Technical specifications trailers

Model	100H	100 4WD	120H	120 4WD	125H	125H 4WD	140 4WDM	160 4WDM
Weight, kg	1490	1850	1690	2050	3000	3400	4000	6600
Carrying capacity, kg	10000	10000	12000	12000	12500	12500	12000	13000
Total weight permitted on bogie with max speed 30 km/h, kg							14000	16000
Cross-section area of load platform, m ²	2.1	2.1	2.9	2.9	3,2	3,2	3,2	3,35
Overall length, mm	5700	5700	6100	6100	6200	6200	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	2 (double) / 2 single
Load supports	6	6	8	8	8	8	8	12
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)*	75 (7500)	90 (9500)
Ground clearance, at bogie, mm	~ 580	~ 580	~ 610	~ 610	~ 700	~ 700	~ 550	~ 660
Ground clearance at rear of frame, mm	~ 580	~ 580	~ 610	~ 610	~ 700	~ 700	~ 700	~ 840
Tyres:								
400 / 60 - 15,5 / 14	S	S						
500/55-17 / 12 ELS	O	O	S	S				
550/45-22,5 / 12 ELS	O	O	O	O				
600/50-22.5 / 12 ELS L-1 TL					S	S	S	
600/50-22.5 / 16 ELS L-2 SF (with steel breaker)							O	
600/50-22.5 / 16 TRS L-2 SF (with steel breaker)							O	
710/45x22,5 Nokian Forest King (with steel breaker)							O	
700/50-26,5 / 16 TRS SFS (with steel breaker)								S
600/55-26,5 / 16 TRS L-2 SF (with steel breaker)								O
Recommended crane	4000	4000	4000/ 5000/ 6020	4000/ 5000/ 6020	5000/ 6020/ 8020	5000/ 6020/ 8020	5000/ 6020/ 8020	5000/ 6020/ 8020
Equipment:								
Front grill	S	S	S	S	S	S	S	S
Hydr.adjustable front grill and bolster					O	O	O	S
Multiple disc brakes							S	S
Operating brake (hydr.drum brakes)	O	O	O	O	S	S		
Parking brake	O	O	O	O	O	O	O	O
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							O	S
Telescopic rear frame-extension with one bolster	O	O	O	O	O	O	O	O

Equipment: S=Standard, O= optional

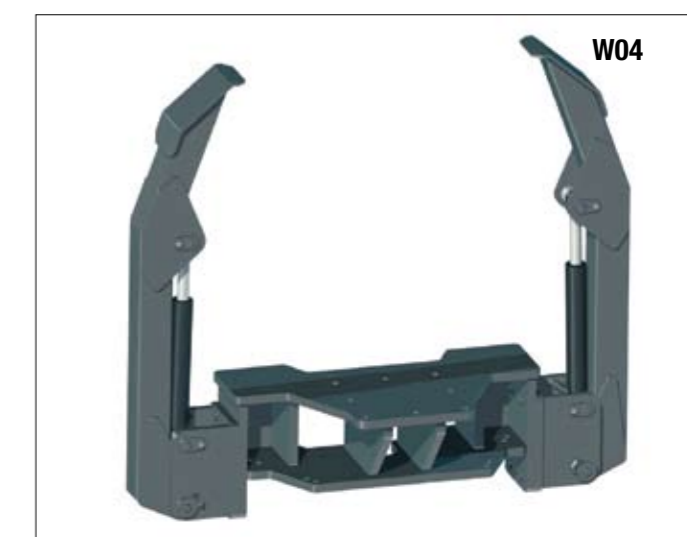
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Crane attaching

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	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	
Max outreach, m	6,5	7,1	7,50	8,30	8,80	9,80	6,00	6,80	7,30	7,80	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	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	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	1,90	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	
Lifting moment, brutto, kNm	39	39	50	50	50	50	50	50	50	50	72	72	72	82	82	82	
Allowable load, kg/4m (without grapple and rotator)	760	710	1000	990	985	982	1000	990	985	982	1140	1080	1040	1550	1500	1350	
Turning angle of boom, degrees	390	390	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	22	22	22	
Lubrication of turning device	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	
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, m ²	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	0,27	0,27	0,27	
Max opening of grapple, mm	1250	1250	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	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	345/425	345/425	345/425	
Weight, grapple + rotator, kg	110	110	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	1200	1240	1250	1240	1280	1400	
Working pressure, bar	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	70-100	70-100	70-100	
Attaching																	
Trailer																	
- Model of crane base	A01,W03,	A01,W03,	A01,W03,	A01,W03,	A01,W03,	A01,W03,	A01,W03,	A01,W03,	A01,W03,	A01,W03,	A01,W03,				125-160	125-160	125-160
- Model of crane base	W04	W04	W04	W04	W04	W04	W04	W04	W04	W04	W04	W04	W04	W04			
To tractor, with universal crane base (3-p link)																	
- Model of crane base	A01	A01	A01	A01	A01	A01	A01	A01	A01	A01	A01						
- Tractor with chassis brackets	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Equipment																	
Swing damper	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Damper	O	O	O	O	O	O	O	O	O	O	O	S	S	S	S	S	S
Hydr. Winch	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Service stair & anti-slip device	#	#	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S

Equipment: S=Standard, O= 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.

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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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