

Machine hour calculation: Excavation topsoil		Take away	Calculation of transport				
Number of m3 to be moved in solid measure		500 m ³	Choice of vehicle: Scania R114CB				
<u>Bucket size</u>		2,00 m ³					
Choice of Machine: Excavator Volvo EC210C			Max load pr vehicle: 0 kg				
			Max number of m3 12,00 m ³				
			Do not exceed the maximum payload 22.200				
Pos.nr:							
Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		2,00	m ³	Max. Weigth		22.200	kg
		500	m ³	Distance to tip		5	km
Density		1850	kg/m ³	Speed		50	km/t
Efficiency		0,6	Faktor	Max volume.	(max weigth/soildensity)/loadingfactor	12,00	m ³
Cyclus time		30	Sek	Drivingtime total	2*(distance*60min/h)/avarage speed	12,00	min
Loadind factor	0,8	0,8	Faktor	Loadingtime	Max volum/bucketsize*(cyklustime/60)	5,00	min
				Unloading time		1,00	min
Bucket factor		1	Faktor	Maneuвреtime		1,60	min
Production.	Bucketsize*(3600/cyclus time)	126,00	m ³ /time	Circulationtime	Loadingtime+drivingtime+maneuvre+ unload	20,00	min
	*Efficiencie.*bucket			Lorrys production	(60min/h/ circulationtime)*max.volume	35,00	m ³ /time
				Number off trucks		3,0	
Hours total		3	Hours	Hours total		14	Hours

Machine hour calculation:				excavation topsoil			
Number of m3 to be moved in solid measure		2609,4 m ³					
Bucket size		5,00 m ³					
Choice of Machine:				Wheel loader VOLVO L602E			
Pos.nr:							
Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		5,00	m ³	Max. Weigth		33.300	kg
		2609,4	m ³	Distance to tip		5	km
Density		1850	kg/m ³	Speed		40	km/t
Efficiency		0,6	Faktor	Max volume.	(max weigth/soildensity)/loadingfactor	18,00	m ³
Cyclus time		30	Sek	Drivingtime total	2*(distance*60min/h)/avarage speed	15,00	min
				Loadingtime	Max volum/bucketsize*(cyklustime/60)	3,00	min

Loadind factor	0,8	0,8 Faktor	Unloading time	1,00 min
Bucket factor		1 Faktor	Maneuвреtime	1,60 min
Production.	Bucketsize*(3600/cyclus time) *Efficiency.*bucket	288,00 m³/time	Circulationtime Lorrys production	Loadingtime+drivingtime+maneuvre+ unload (60min/h/ circulationtime)*max.volume 21,35 min 50,00 m³/time
			Number off trucks	5,0
Hours total		9 Hours	Hours total	51 Hours

Machine hour calculation:	Exacavation foundation		Calculation of transport
Number of m3 to be moved in solid measure	2514 m³		Choice of vehicle: Mercedes- Benz 2538
Bucket size	3,00 m³		
Choice of Machine: CAT 390D I			Max load pr vehicle: 20000 kg
			Max number of m3 18,00 m³
			Do not exceed the maximum payload 33.300

Pos.nr:			
Text	Formel.	Quantity Unit	Text Formel. Quantity Unit
Bucket size		3,00 m³	Max. Weigth 33.300 kg
		2514 m³	Distance to tip 5 km
Density		1850 kg/m³	Speed 40 km/t
Efficiency		0,6 Faktor	Max volume. (max weigth/soildensity)/loadingfactor 18,00 m³
Cyclus time		20 Sek	Drivingtime total 2*(distance*60min/h)/avarage speed 15,00 min
Loadind factor	0,8	0,8 Faktor	Loadingtime Max volum/bucketsize*(cyklustime/60) 4,00 min
Bucket factor		1 Faktor	Unloading time 1,00 min
			Maneuвреtime 1,60 min
Production.	Bucketsize*(3600/cyclus time) *Efficiency.*bucket	259,20 m³/time	Circulationtime Loadingtime+drivingtime+maneuvre+ unload 21,00 min
			Lorrys production (60min/h/ circulationtime)*max.volume 49,00 m³/time
			Number off trucks 5,0
Hours total		9 Hours	Hours total 50 Hours

Machine hour calculation:	Exavation sewer		Calculation of transport
Number of m3 to be moved in solid measure	259,67 m³		Choice of vehicle: Mercedes- Benz 2538
Bucket size	3,00 m³		
Choice of Machine: CAT 390D I			Max load pr vehicle: 20000 kg
			Max number of m3 18,00 m³
			Do not exceed the maximum payload 33.300

Pos.nr:

Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		3,00	m ³	Max. Weigth		33.300	kg
		259,67	m ³	Distance to tip		5	km
Density		1850	kg/m ³	Speed		40	km/t
Efficiency		0,6	Faktor	Max volume.	(max weigth/soildensity)/loadingfactor	18,00	m ³
Cyclus time		20	Sek	Drivingtime total	2*(distance*60min/h)/avarage speed	15,00	min
Loadind factor	0,8	0,8	Faktor	Loadingtime	Max volum/bucketsize*(cyklustime/60)	4,00	min
Bucket factor		1	Faktor	Unloading time		1,00	min
				Maneuвреtime		1,60	min
Production.	Bucketsize*(3600/cyclus time) *Efficiency.*bucket	259,20	m ³ /time	Circulationtime	Loadingtime+drivingtime+maneuvre+ unload	21,00	min
				Lorrys production	(60min/h/ circulationtime)*max.volume	49,00	m ³ /time
				Number off trucks		5,0	
Hours total				Hours total			

Machine hour calculation:	Excavation parking
Number of m3 to be moved in solid measure	568,75 m ³
Bucket size	3,00 m ³
Choice of Machine:	CAT 390D I
Calculation of transport	
Choice of vehicle:	Mercedes- Benz 2538
Max load pr vehicle:	20000 kg
Max number of m3	18,00 m ³
Do not exceed the maximum payload	33.300

Pos.nr:							
Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		3,00	m ³	Max. Weigth		33.300	kg
		568,75	m ³	Distance to tip		5	km
Density		1850	kg/m ³	Speed		40	km/t
Efficiency		0,6	Faktor	Max volume.	(max weigth/soildensity)/loadingfactor	18,00	m ³
Cyclus time		20	Sek	Drivingtime total	2*(distance*60min/h)/avarage speed	15,00	min
Loadind factor	0,8	0,8	Faktor	Loadingtime	Max volum/bucketsize*(cyklustime/60)	4,00	min
Bucket factor		1	Faktor	Unloading time		1,00	min
				Maneuвреtime		1,60	min
Production.	Bucketsize*(3600/cyclus time) *Efficiency.*bucket	259,20	m ³ /time	Circulationtime	Loadingtime+drivingtime+maneuvre+ unload	21,00	min
				Lorrys production	(60min/h/ circulationtime)*max.volume	49,00	m ³ /time
				Number off trucks		5,0	

Hours total	2 Hours	Hours total	11 Hours
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Machine hour calculation: Backfilling topsoil		Calculation of transport
Number of m3 to be moved in solid measure	205,38 m ³	Choice of vehicle: Mercedes- Benz 2538
Bucket size	3,00 m ³	
Choice of Machine: Excavator Volvo EC210C		Max load pr vehicle: 20000 kg
		Max number of m3 18,00 m ³
		Do not exceed the maximum payload 33.300
Pos.nr:		

Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		3,00	m ³	Max. Weigth		33.300	kg
		205,38	m ³	Distance to tip		5	km
Density		1850	kg/m ³	Speed		40	km/t
Efficiency		0,6	Faktor	Max volume.	(max weigth/soildensity)/loadingfactor	18,00	m ³
Cyclus time		20	Sek	Drivingtime total	2*(distance*60min/h)/avarage speed	15,00	min
Loadind factor	0,8	0,8	Faktor	Loadingtime	Max volum/bucketsize*(cyklustime/60)	4,00	min
Bucket factor		1	Faktor	Unloading time		1,00	min
				Maneuвреtime		1,60	min
Production.	Bucketsize*(3600/cyclus time)	259,20	m ³ /time	Circulationtime	Loadingtime+drivingtime+maneuvre+ unload	21,00	min
	*Effience.*bucket			Lorrys production	(60min/h/ circulationtime)*max.volume	49,00	m ³ /time
				Number off trucks		5,0	

Hours total	#iVALOR! Hours	Hours total	4 Hours
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Machine hour calculation: backfilling parking		Calculation of transport
Number of m3 to be moved in solid measure	1129 m ³	Choice of vehicle: Mercedes- Benz 2538
Bucket size	3,00 m ³	
Choice of Machine: Excavator Volvo EC210C		Max load pr vehicle: 20000 kg
		Max number of m3 20,00 m ³
		Do not exceed the maximum payload 37.000
Pos.nr:		

Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		3,00	m ³	Max. Weigth		37.000	kg
		1129	m ³	Distance to tip		5	km
Density		1850	kg/m ³	Speed		40	km/t

Efficiency		0,6 Faktor	Max volume.	(max weigth/soildensity)/loadingfactor	20,00 m ³
Cyclus time		20 Sek	Drivingtime total	2*(distance*60min/h)/avarage speed	15,00 min
Loadind factor	0,8	0,8 Faktor	Loadingtime	Max volum/bucketsize*(cyklustime/60)	4,00 min
Bucket factor		1 Faktor	Unloading time		1,00 min
			Maneuvretime		1,60 min
Production.	Bucketsize*(3600/cyclus time)	259,20 m ³ /time	Circulationtime	Loadingtime+drivingtime+maneuvre+ unload	22,00 min
	*Efficiency.*bucket		Lorrys production	(60min/h/ circulationtime)*max.volume	53,00 m ³ /time
			Number off trucks		4,0
Hours total			4 Hours		
Hours total			20 Hours		

Machine hour calculation: backfilling foundation			Calculation of transport		
Number of m3 to be moved in solid measure		2543,9 m ³	Choice of vehicle: Mercedes- Benz 2538		
Bucket size		3,00 m ³			
Choice of Machine: Excavator Volvo EC210C					
			Max load pr vehicle:		20000 kg
			Max number of m3		20,00 m ³
			Do not exceed the maximum payload		37.000
Pos.nr:					

Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		3,00	m ³	Max. Weigth		37.000	kg
		2543,9	m ³	Distance to tip		5	km
Density		1850	kg/m ³	Speed		40	km/t
Efficiency		0,6 Faktor		Max volume.	(max weigth/soildensity)/loadingfactor	20,00	m ³
Cyclus time		20 Sek		Drivingtime total	2*(distance*60min/h)/avarage speed	15,00	min
Loadind factor	0,8	0,8 Faktor		Loadingtime	Max volum/bucketsize*(cyklustime/60)	4,00	min
Bucket factor		1 Faktor		Unloading time		1,00	min
				Maneuvretime		1,60	min
Production.	Bucketsize*(3600/cyclus time)	259,20 m ³ /time		Circulationtime	Loadingtime+drivingtime+maneuvre+ unload	22,00	min
	*Efficiency.*bucket			Lorrys production	(60min/h/ circulationtime)*max.volume	53,00	m ³ /time
				Number off trucks		4,0	
Hours total				9 Hours			
Hours total				47 Hours			

Machine hour calculation:			Calculation of transport		
Number of m3 to be moved in solid measure		0 m ³	Choice of vehicle:		
Bucket size		0,00 m ³			

Choice of Machine:	Max load pr vehicle:	0 kg
	Max number of m3	0,00 m³
	Do not exceed the maximum payload	0

Pos.nr:							
Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		0,00	m³	Max. Weigth		0	kg
		0	m³	Distance to tip		0	km
Density		0	kg/m³	Speed		0	km/t
Efficiency		0,6	Faktor	Max volume.	(max weigth/soildensity)/loadingfactor	0,00	m³
Cyclus time		0	Sek	Drivingtime total	2*(distance*60min/h)/avarage speed	#DIV/0!	min
Loadind factor	0,8	0,8	Faktor	Loadingtime	Max volum/bucketsize*(cyklustime/60)	#DIV/0!	min
Bucket factor		1	Faktor	Unloading time		1,00	min
				Maneuвреtime		1,60	min
Production.	Bucketsize*(3600/cyclus time)	#DIV/0!	m³/time	Circulationtime	Loadingtime+drivingtime+maneuvre+ unload	#DIV/0!	min
	*Effience.*bucket			Lorrys production	(60min/h/ circulationtime)*max.volume	#DIV/0!	m³/time
				Number off trucks		#DIV/0!	
Hours total		#DIV/0!	Hours	Hours total		#DIV/0!	Hours

Machine hour calculation: Excavation topsoil		Calculation of transport	
Number of m3 to be moved in solid measure	0 m³	Choice of vehicle:	
Bucket size	0,00 m³		
Choice of Machine:		Max load pr vehicle:	0 kg
		Max number of m3	0,00 m³
		Do not exceed the maximum payload	0

Pos.nr:							
Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		0,00	m³	Max. Weigth		0	kg
		0	m³	Distance to tip		0	km
Density		0	kg/m³	Speed		0	km/t
Efficiency		0,6	Faktor	Max volume.	(max weigth/soildensity)/loadingfactor	0,00	m³
Cyclus time		0	Sek	Drivingtime total	2*(distance*60min/h)/avarage speed	#DIV/0!	min
Loadind factor	0,8	0,8	Faktor	Loadingtime	Max volum/bucketsize*(cyklustime/60)	#DIV/0!	min
Bucket factor		1	Faktor	Unloading time		1,00	min
				Maneuвреtime		1,60	min

Production.	Bucket size*(3600/cyclus time) *Efficiency.*bucket	#DIV/0! m³/time	Circulation time	Loading time+driving time+maneuvre+ unload	#DIV/0! min
			Lorrys production	(60min/h/ circulation time)*max. volume	#DIV/0! m³/time
			Number off trucks		#DIV/0!

Hours total	#DIV/0! Hours	Hours total	#DIV/0! Hours
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Machine hour calculation:		Calculation of transport
Number of m3 to be moved in solid measure	0 m³	Choice of vehicle:
Bucket size	0,00 m³	
Choice of Machine:		Max load pr vehicle: 0 kg
		Max number of m3 0,00 m³
		Do not exceed the maximum payload 0

Pos.nr:

Text	Formel.	Quantity	Unit	Text	Formel.	Quantity	Unit
Bucket size		0,00	m³	Max. Weigth		0	kg
		0	m³	Distance to tip		0	km
Density		0	kg/m³	Speed		0	km/t
Efficiency		0,6	Faktor	Max volume.	(max weigth/soildensity)/loadingfactor	0,00	m³
Cyclus time		0	Sek	Driving time total	2*(distance*60min/h)/avarage speed	#DIV/0!	min
Loadind factor	0,8	0,8	Faktor	Loading time	Max volum/bucket size*(cyklustime/60)	#DIV/0!	min
Bucket factor		1	Faktor	Unloading time		1,00	min
				Maneuvre time		1,60	min
Production.	Bucket size*(3600/cyclus time) *Efficiency.*bucket	#DIV/0!	m³/time	Circulation time	Loading time+driving time+maneuvre+ unload	#DIV/0!	min
				Lorrys production	(60min/h/ circulation time)*max. volume	#DIV/0!	m³/time
				Number off trucks		#DIV/0!	

Hours total	#DIV/0! Hours	Hours total	#DIV/0! Hours
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