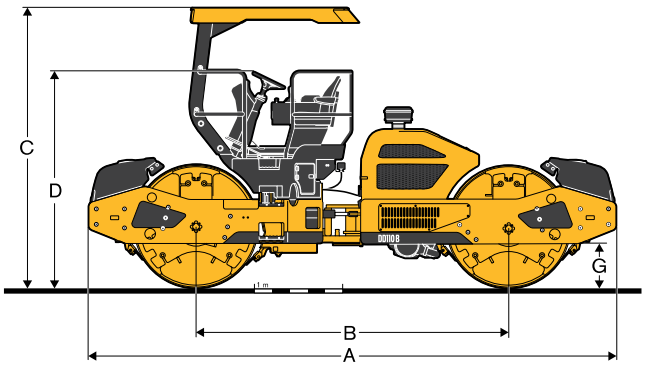
Volvo Construction Equipment

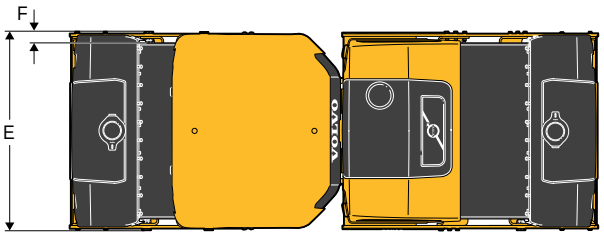
DD110B, DD120B, DD140B

Volvo Double Drum Compactors 11-14 t 131.5-148 hp

Specifications

Model				DD110B					
				2 amplitudes		8 amplitudes		HFA	
Machine Weights (w/ ROPS / FOPS)									
Operating Weight (CECE)		kg	lb	11 250	24,807	11 250	24,807	11 250	24,807
Weight @ Front Drum		kg	lb	5 906	13,024	5 906	13,024	5 906	13,024
Weight @ Rear Drum		kg	lb	5 344	11,783	5 344	11,783	5 344	11,783
Shipping Weight		kg	lb	10 537	23,235	10 537	23,235	10 537	23,235
Drum									
Width		mm	in	1 700	66.9	1 700	66.9	1 700	66.9
Diameter		mm	in	1 300	51.2	1 300	51.2	1 300	51.2
Shell Thickness (no minal)		mm	in	20	0.79	20	0.79	20	0.79
Finish		mm	in	Machined surface; chamfered & radiused edges					
Propulsion									
Type				Closed-loop hydrostatic, parallel circuit to both drums					
Drum Drive				Heavy-duty radial piston LSHT motors; 2-speed rear motor					
Travel Speed	High	km/h	mph	12.8	7.9	13	8.1	13	8.1
	Low	km/h	mph	7.5	4.7	7.6	4.7	7.6	4.7
Engine									
Make / Model				Volvo Deutz D4					
Engine Type				4 Cyl, Electronic, Turbocharged, CAC, U.S. EPA Tier 4 interim					
Rated Power @ Installed Speed		kW	hp	98.1	131.5	98.1	131.5	98.1	131.5
Electrical				24 volts DC, negative ground; 120 A alternator					
Brakes									
Service				Dynamic hydrostatic through propulsion system					
Parking / Secondary				SAHR on front-drum & rear-drum drive motors					
Water System									
Type				Pressure spray drum wetting system with LDPE water tanks					
Pumps				Diaphragm water pumps, primary and secondary for each drum					
Spray Bars				Primary and secondary spray bars for each drum					
Nozzles				Hand-serviceable fan spray nozzles; 8 per spray bar					
Filtration				Sock strainer each tank; primary water filter each pump, fine filter each nozzle					
Drum Wipers				Front & rear Styrene wipers for each drum					
Water Tank Capacity		l	gal	549	145	549	145	549	145
Miscellaneous									
Inside Turning Radius (to drum edge)		mm	in	3 889	153.1	3 889	153.1	3 889	153.1
Articulation Angle (center pivot steering)				+ / - 40°					
Oscillation Angle				+ / - 10°					
Fuel Tank Capacity		l	gal	193					51
Hydraulic Oil Capacity		l	gal	128	33.8	128	33.8	128	33.8
Gradeability (theoretical)					31%		31%		31%





Model				DD120B						DD140B	
				2 amplitudes		8 amplitudes		HFA		2 amplitudes	
Machine Weights (w/ ROPS / FOPS)											
Operating Weight (CECE)		kg	lb	12 702	28,008	12 702	28,008	12 702	28,008	14 104	31,095
Weight @ Front Drum		kg	lb	6 683	14,737	6 683	14,737	6 683	14,737	6 818	15,034
Weight @ Rear Drum		kg	lb	6 018	13,271	6 018	13,271	6 018	13,271	7 578	16,710
Shipping Weight		kg	lb	11 981	26,420	11 981	26,420	11 981	26,420	13 681	30,168
Drum											
Width		mm	in	2 000	78.7	2 000	78.7	2 000	78.7	2 136	84.1
Diameter		mm	in	1 400	55.1	1 400	55.1	1 400	55.1	1 400	55.1
Shell Thickness (nominal)		mm	in	20	0.78	20	0.78	20	0.78	20	0.78
Finish				Machined surface; chamfered & radiused edges							
Propulsion											
Type				Closed-loop hydrostatic, parallel circuit to both drums							
Drum Drive				Heavy-duty radial piston LSHT motors; 2-speed rear motor							
Travel Speed	High	km/h	mph	11.4	7.1	11.4	7.1	11.4	7.1	11.4	7.1
	Low	km/h	mph	8.6	5.3	8.6	5.3	8.6	5.3	8.6	5.3
Engine											
Make / Model				Volvo Deutz D4							
Engine Type				4 Cyl, Electronic, Turbocharged, CAC, U.S. EPA Tier 4 interim							
Rated Power @ Installed Speed		kW	hp	110.4	148	110.4	148	110.4	148	110.4	148
Electrical				24 volts DC, negative ground; 120 A alternator							
Brakes											
Service				Dynamic hydrostatic through propulsion system							
Parking / Secondary				SAHR on front-drum & rear-drum drive motors							
Water System											
Type				Pressure spray drum wetting system with LDPE water tanks							
Pumps				Diaphragm water pumps, primary and secondary for each drum							
Spray Bars				Primary and secondary spray bars for each drum							
Nozzles				Hand-serviceable fan spray nozzles 10 per spray bar						12 per spray bar	
Filtration				Sock strainer each tank; primary water filter each pump, fine filter each nozzle							
Drum Wipers				Front & rear Styrene wipers for each drum							
Water Tank Capacity		l	gal	605.6	160	605.6	160	605.6	160	605.6	160
Miscellaneous											
Inside Turning Radius (to drum edge)		mm	in	3 772	148.5	3 772	148.5	3 772	148.5	4 562	179.6
Articulation Angle (center pivot steering)				+ / - 40°						+/- 35 °	
Oscillation Angle				+ / - 10°						+/- 10 °	
Fuel Tank Capacity		l	gal	226					60	256	68
Hydraulic Oil Capacity		l	gal	140	37	140	37	140	37	143.8	38
Gradeability (theoretical)					35%		35%		35%		30%

DIMENSIONS

			DD110B		DD120B		DD140B	
A	Overall Length	mm	in	5 795	228.1	5 995	236.0	5 995	236.0
B	Drum Base	mm	in	3 450	135.8	3 550	139.8	3 550	139.8
C	Overall Height (top of ROPS / FOPS)	mm	in	3 140	123.6	3 187	125.5	3 200	126.0
D	Overall Height (top of steering wheel)	mm	in	2 386	93.9	2 463	97.0	2 470	97.2
E	Overall Width	mm	in	1 920	75.6	2 249	88.5	2 375	93.5
F	Side Clearance	mm	in	110	4.3	125	4.9	120	4.7
G	Curb Clearance	mm	in	460	18.1	510	20.1	510	20.1

Specifications

DD110B																	
2 amplitudes																	
			High Frequency - Low amplitude						**Low Frequency - High amplitude**								
Nominal amplitude	mm	in	0.42					0.0165	0.89					0.035			
Vibration frequency	Hz	vpm	70					4,200	50					3,000			
Eccentric Force	kN	lb	146					32,810	158					35,510			
8 amplitudes																	
Handwheel Setting			**1**		**2**		**3**		**4**		**5**		**6**		**7**		**8**	
Nominal amplitude	mm	in	0.25	0.01	0.29	0.0113	0.36	0.0142	0.45	0.0176	0.53	0.0207	0.59	0.0232	0.63	0.0248	0.64	0.0253
Vibration frequency	Hz	vpm	63.3								3,800							
Eccentric Force	kN	lb	72.4	16,270	81.5	18,320	102.8	23,110	127.4	28,650	150.1	33,750	168.0	37,760	179.3	40,300	183.1	41,170
8 amplitudes HFA																		
Handwheel Setting			**1**		**2**		**3**		**4**		**5**		**6**		**7**		**8**	
Nominal amplitude	mm	in	0.42	0.0165	0.45	0.0179	0.54	0.0212	0.64	0.0253	0.74	0.0292	0.82	0.0323	0.87	0.0343	0.89	0.035
Vibration frequency	Hz	vpm	70	4,200	67.5	4,050	63.3	3,800	60	3,600	55	3,300	53.3	3,200	50	3,000	50	3,000
Eccentric Force	kN	lb	145.8	32,810	146.9	33,050	153.7	34,590	164.6	37,040	159.5	35,890	165.9	37,330	154.8	34,820	157.8	35,510

DD120B																	
2 amplitudes																	
			High Frequency - Low amplitude						**Low Frequency - High amplitude**								
Nominal amplitude	mm	in	0.36					0.014	0.89					0.035			
Vibration frequency	Hz	vpm	70					4,200	50					3,000			
Eccentric Force	kN	lb	147					33,090	187					42,070			
8 amplitudes																	
Handwheel Setting			**1**		**2**		**3**		**4**		**5**		**6**		**7**		**8**	
Nominal amplitude	mm	in	0.38	0.0149	0.40	0.0157	0.46	0.018	0.53	0.0208	0.60	0.0235	0.65	0.0257	0.69	0.0271	0.70	0.0276
Vibration frequency	Hz	vpm	56.6	3,400	56.6	3,400	56.6	3,400	56.6	3,400	56.6	3,400	56.6	3,400	56.6	3,400	56.6	3,400
Eccentric Force	kN	lb	102.2	22,980	108.2	24,328	123.6	27,780	142.8	32,110	161.5	36,310	176.7	39,720	186.5	41,920	189.8	42,680
8 amplitudes HFA																		
Handwheel Setting			**1**		**2**		**3**		**4**		**5**		**6**		**7**		**8**	
Nominal amplitude	mm	in	0.36	0.014	0.40	0.0157	0.50	0.0197	0.62	0.0244	0.73	0.0287	0.82	0.0321	0.87	0.0342	0.89	0.0349
Vibration frequency	Hz	vpm	70	4,200	66.7	4,000	60	3,600	56.7	3,400	53.3	3,200	51.7	3,100	50	3,000	50	3,000
Eccentric Force	kN	lb	147.2	33,090	149.8	33,670	152.2	34,220	167.8	37,720	174.8	39,300	183.3	41,220	183.2	41,190	187.1	42,070

DD140B																	
2 amplitudes																	
			High Frequency - Low amplitude						**Low Frequency - High amplitude**								
Nominal amplitude	mm	in	0.35					0.014	0.88					0.035			
Vibration frequency	Hz	vpm	66.7					4,000	45					2,700			
Eccentric Force	kN	lb	163					36,680	185					41,720			