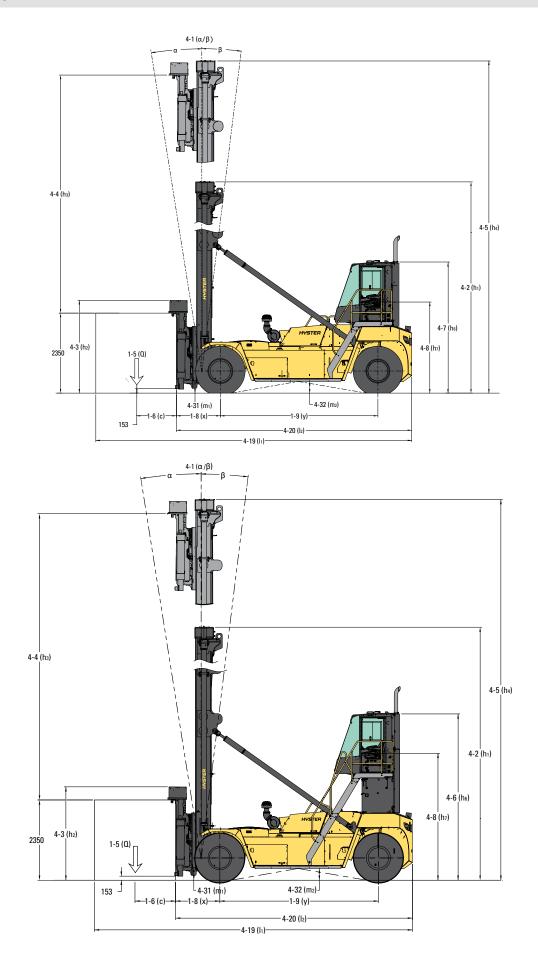


# **EMPTY CONTAINER HANDLER** PRODUCT TECHNICAL GUIDE



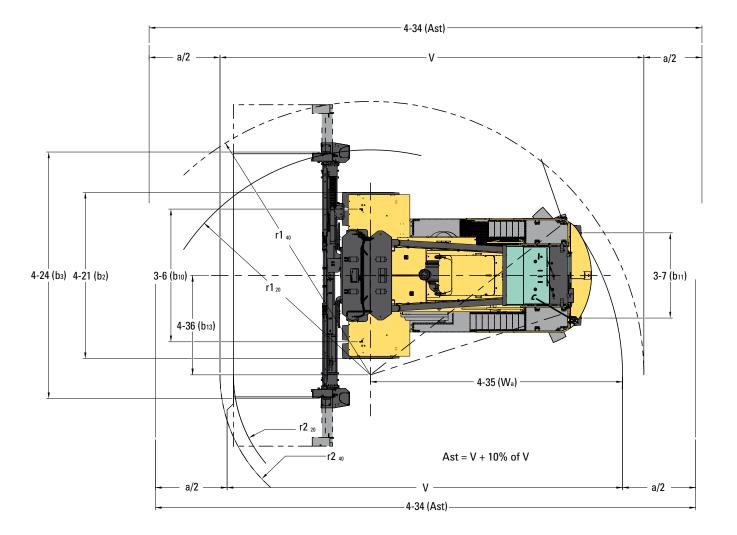
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# DIMENSIONS



2

### DIMENSIONS



- r<sub>1</sub> = radius of swing of container rear corner
- $r_2$  = radius of swing of container front corner
- W<sub>a</sub> = outside turning radius of the truck
- a = total operating clearance:
  - = 200 mm (100 mm each side acc. VDI) see VDI line 4-34-3 and 4-34-4
- V = (theoretical) 90 ~ stacking aisle width, no intrusive stacking:
- V =  $r_2$  + the larger of  $r_1$  or  $W_a$
- Ast = (practical) 90 ~ stacking aisle width, no intrusive stacking and with clearance:
- Ast = V + a

# H180XD-EC6 | H180XD-EC7 SPECIFICATIONS

	1-1	Manufacturer					HYS	TED			HYS	TED	
							H180X				H180X		
		Model designation (AM)											
		Powertrain / drivetrain					Diesel Seated			Diesel			
GENERAL		Operator type				10.1			0.5	10	Sea		
ENE		Load capacity at load center, nominal (1) AM	Q	lb	kg	18,0		8,1			000		165
9		Load center	С	in	mm	4		1,2			18		220
		Load distance	х	in	mm	5		1,3			53		357
		Wheelbase	у	in	mm	17		4,5	500	1	77		500
	1-10	······································		#	<b>#</b>		6 /	5			7/		
노	2-1	Service weight		lb	kg	78,	392	35,	558	81,	377	,	912
WEIGHT		Axle loading with load, front / rear		lb	kg	77,852	35,313	18,065	1	81,117	36,794		8,068
≥	2-3	Axle loading without load, front / rear		lb	kg	50,563	22,935	27,829	12,623	53,828	24,416	27,551	12,497
	3-1	Tire type		Ty	ре		Pneur	natic			Pneu	natic	
10	3-2	Tire size, front					14.00-24	4 24PR			14.00-2	4 24PR	
Ē	3-3	Tire size, rear					14.00-24	4 24PR			14.00-2	4 24PR	
WHEELS	3-5	Number of tires, front / rear ( X driven )		#	ŧ		x4 /	/ 2			x4	/ 2	
		Tread, front	b <sub>10</sub>	in	mm	12	29	3,2	.82	1:	29	3,2	282
	3-7	Tread, rear	b <sub>11</sub>	in	mm	8	3	2,1	08	8	33	2,1	108
	4-1	Mast tilt, forward / backward	α/β	Deg	jree		4 /	3			4/	3	
	4-2	Height, mast lowered	h <sub>1</sub>	in	mm	37	74	9,4	95	4	25	10,	795
	4-3	Freelift	h <sub>2</sub>	in	mm	(	)	(	)		0	(	0
	4-4	Lift	h <sub>3</sub>	in	mm	54	45	13,	850	6	48	16,	450
	4-4-1	Lift minimum (3)	h <sub>3.1.1</sub>	in	mm	9	1	2,3	818	g	)1	2,3	318
	4-4-2	Lift maximum (3)	h <sub>3.1.2</sub>	in	mm	63	37	16,	168	7	39	18,	768
	4-5	Height, mast extended		in	mm	64	16	16,	420	7.	49	19,	020
	4-7-1	Height of overhead guard (closed cab)		in	mm	14	19	3,7	'91	1.	49	3,7	791
	4-7-3	Height of overhead guard (closed cab w/ strobe light)		in	mm	14	19	3,7	'91	1.	49	3,7	791
NS		Height of overhead guard (closed cab w/ work lights)		in	mm	15	56	3,9	61	1	56	3,9	961
DIMENSIONS	4-8		h <sub>7</sub>	in	mm	10	)4	2,6	50	1	04	2,6	650
EN	4-19		I,	in	mm	36	65	9,2	264	365		9,264	
DIN	4-20		12	in	mm	26	69	6,8	324	269		6,824	
	4-21	Overall width across drive tires	b <sub>2</sub>	in	mm	16	62	4,1	10	1	62	4,1	110
		Width across spreader, retracted / extended	2	in	mm	240	6,084	481	12,218	240	6,084	481	12,218
		Sideshift		in	mm	+/-	24	+/-(		+/-	-24	+/-	
		Ground clearance, lowest point	m1	in	mm		2	29			2		93
		Ground clearance, center of wheelbase	m <sub>2</sub>	in	mm	1		38			5		83
		Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke	Ast <sub>20</sub>	in	mm	418	10,614	400	10,144	418	10,614	400	10,144
	_	Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke	Ast <sub>40</sub>	in	mm	558	14,180	546	13,875	558	14,180	546	13,875
	4-35		W <sub>a</sub>	in	mm	268	6,797	249	6,327	268	6,797	249	6,327
	4-36	Internal turning radius, reduced / full stroke	b <sub>13</sub>	in	mm	64	1,619	30	763	64	1,619	30	763
		DRMANCE	- 13				Tier 3 / S	tage IIIA			Tier 3 / S	tage IIIA	
		Travel speed, with / without load		mph	km/h	12.4	20	15.5	25	12.4	20	15.5	25
PERFORMANCE		Lifting speed, with / without load		ft/min	m/s	100	0.51	132	0.67	100	0.51	132	0.67
MA		Lowering speed with / without load		ft/min	m/s	108	0.55	108	0.55	108	0.55	108	0.55
ORI	5-5			lb	kN	36,000	160	36,200	161	36,000	160	36,200	161
ERF		Drawbar pull - max, with / without load		lb	kN	43,400	193	43,600	194	43,200	192	43,600	194
Р	5-7	Gradeability - 1 mph (1.6 km/h), with / without load (5)		9		.,	40 /			.,	39 /		
	5-8			9			49 /				48 /		
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# H200XD-EC7 | H200XD-EC8 SPECIFICATIONS

		1-1	Manufacturer					HYS	TER			НУ	STER	
Image: space spa														
N         1/2         0         1/2         0 </th <th></th>														
9         1.0         Load capacity is load center, nominal (1) AM         0         bit N         N         20.000         9.072         20.000         9.072           1.5         Load center         0         in         mm         43         1.22         4.00         3.3         1.35         53         1.35           1.60         Continer stacking height, 8% / 98°         3.43         1.77         4.50         7.6         3.3         3.85         9.143         1.35         1.35           2.2         Ack loading with load, font / rear         0         b         kg         65.755         3.558         2.596         3.858         9.143         1.455           2.3         Ter size, font         Tree size, font         Tree size, font         1.400-542 42 R         Tree size, font         1.400-542 42 R         Tree size, font         1.400-542 42 R         Tree size, font         2.576         3.138         1.430         1.430           3.3         Ter size, font         C         Tree size, font         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N         N <t< th=""><th>Ļ</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th colspan="2"></th><th colspan="2"></th><th></th><th></th></t<>	Ļ													
Image         <	ERA			0	lh	ka	20 (			172	20			72
Image         <	SEN													
b         kg         B5.75         S0.90         91.43         41.47           b         kg         B4.01         31.83         21.26         9.655         87.13         33.896         23.271         10.50           23         Ade loading without font / rear         ib         kg         84.01         31.83         21.266         9.655         87.13         33.896         23.271         10.50           23         Tire type         Tire type         Type         Type         Type         14.00-24 24PR         14.00-R24           24         Tire size, ront         14.00-R24         Tire size, ront         14.00-R24         Tire size, ront         14.00-R24           24         Mask of tires, fort / rear (X driven)         be         in         mm         Tire size, ront         14.00-R24           24         Height, mask lowered         he         in         mm         72.5         72.5         72.0         72.5         72.0         72.5         72.5         72.0         72.5         72.7         72.2         72.5         72.7         72.2         72.8         72.7         72.8         72.8         72.7         72.8         72.8         72.7 <th72.7< th="">         72.7         72.7</th72.7<>				,										
Image: Second	E					ka	85			898	91			187
3-1         The type         3-1         The type         Pneumatic bias ply         Pneumatic bias ply         Pneumatic radia           3-3         Time size, front         1         1         1         14.00-224 24PR         14.00-824         14.00-824           3-3         Time size, front         ba         in         mm         129         3.282         138         3.07           3-4         Tread, front         ba         in         mm         129         3.282         138         3.07           3-4         Tread, front         ba         in         mm         129         3.282         10.78         4.13         2.108           4-4         Height nast lowerad         back ward         mm         mm         4.3         7.66         12.095           4-4         Height nast lowerad         back ward           4-4         Lift mainmum (3)         back ward         <	ЮH					-	· · ·						,	
3-1         The type         The type         Type         Pneumatic bias pl/         Pneumatic bias pl/<	WE		• • • • •					1 A A A A A A A A A A A A A A A A A A A					,	
91         32         The size, front         14.00-24 24P         The size, rear         14.00-24 24P         The size, rear         14.00-242 42P         The size, rear         14.00-24 42P         14.00-24 42P         14.00-24 42P         14.00-24 42P         14.00-24 42P         14.00-24 42P         14.00-24         10.00         10.00         1											.,			,
3-5       Tread, rear       bp <sub>0</sub> in       m       12.9       3.28.2       13.8       3.50 <sup>-</sup> 3-7       Tread, rear       bp <sub>1</sub> in       mm       mm       3.210 <sup>-</sup> 8.3       2.10 <sup>-</sup> 4-1       Mast tilt, forward / backward       cd/β       Deyre <i>i</i> /3.7       10.75 <sup>-</sup> 4.76       12.05 <sup></sup> 4-3       Freelift       hp,       in       mm       mm       4.42       10.75 <sup>-</sup> 4.76       12.05 <sup></sup> 4-4.4       Lift       min       mm       mm       7.39 <sup></sup> 18.76 <sup></sup> 8.41       2.138 <sup></sup> 9.10 <sup></sup> 2.318 <sup></sup> 9.10 <sup></sup> 2.318 <sup></sup> 4-4.2       Lift mainum (3)       h <sub>3.11</sub> in       mm       mm       7.39 <sup></sup> 18.76 <sup></sup> 8.411       2.1.8 <sup></sup> 4-4.4       Lift mainum (3)       min       mm       mm       mm       7.39 <sup></sup> 14.9       3.71 <sup></sup> 14.9       3.71 <sup></sup> 4-7.4       Height or ownead guard (closed cab)       mm       mm       14.9       3.71 <sup></sup> 14.9       3.71 <sup></sup> 4-7.2       Height or ownead guard (closed cab wixork light)       m       mm       mm       1														
3-5       Tread, rear       bp <sub>0</sub> in       m       12.9       3.28.2       13.8       3.50 <sup>-</sup> 3-7       Tread, rear       bp <sub>1</sub> in       mm       mm       3.210 <sup>-</sup> 8.3       2.10 <sup>-</sup> 4-1       Mast tilt, forward / backward       cd/β       Deyre <i>i</i> /3.7       10.75 <sup>-</sup> 4.76       12.05 <sup></sup> 4-3       Freelift       hp,       in       mm       mm       4.42       10.75 <sup>-</sup> 4.76       12.05 <sup></sup> 4-4.4       Lift       min       mm       mm       7.39 <sup></sup> 18.76 <sup></sup> 8.41       2.138 <sup></sup> 9.10 <sup></sup> 2.318 <sup></sup> 9.10 <sup></sup> 2.318 <sup></sup> 4-4.2       Lift mainum (3)       h <sub>3.11</sub> in       mm       mm       7.39 <sup></sup> 18.76 <sup></sup> 8.411       2.1.8 <sup></sup> 4-4.4       Lift mainum (3)       min       mm       mm       mm       7.39 <sup></sup> 14.9       3.71 <sup></sup> 14.9       3.71 <sup></sup> 4-7.4       Height or ownead guard (closed cab)       mm       mm       14.9       3.71 <sup></sup> 14.9       3.71 <sup></sup> 4-7.2       Height or ownead guard (closed cab wixork light)       m       mm       mm       1	ELS	3-3	Tire size, rear					14.00-2	24 24PR					
3-5       Tread, rear       bp <sub>0</sub> in       m       12.9       3.28.2       13.8       3.50 <sup>-</sup> 3-7       Tread, rear       bp <sub>1</sub> in       mm       mm       3.210 <sup>-</sup> 8.3       2.10 <sup>-</sup> 4-1       Mast tilt, forward / backward       cd/β       Deyre <i>i</i> /3.7       10.75 <sup>-</sup> 4.76       12.05 <sup></sup> 4-3       Freelift       hp,       in       mm       mm       4.42       10.75 <sup>-</sup> 4.76       12.05 <sup></sup> 4-4.4       Lift       min       mm       mm       7.39 <sup></sup> 18.76 <sup></sup> 8.41       2.138 <sup></sup> 9.10 <sup></sup> 2.318 <sup></sup> 9.10 <sup></sup> 2.318 <sup></sup> 4-4.2       Lift mainum (3)       h <sub>3.11</sub> in       mm       mm       7.39 <sup></sup> 18.76 <sup></sup> 8.411       2.1.8 <sup></sup> 4-4.4       Lift mainum (3)       min       mm       mm       mm       7.39 <sup></sup> 14.9       3.71 <sup></sup> 14.9       3.71 <sup></sup> 4-7.4       Height or ownead guard (closed cab)       mm       mm       14.9       3.71 <sup></sup> 14.9       3.71 <sup></sup> 4-7.2       Height or ownead guard (closed cab wixork light)       m       mm       mm       1	HE	3-5	Number of tires, front / rear ( X driven )		#	¥		x4	/2			x4	/2	
3-7       Tread, rear       D <sub>11</sub> in       mm $0.1$ $0$ $0.1$	5		, , ,	b <sub>10</sub>	in	mm	12			282	13			07
4.1       Mast tilt, forward / backward       cr/β       Degre       I       J </th <th></th> <th>3-7</th> <th>Tread, rear</th> <th></th> <th>in</th> <th>mm</th> <th>8</th> <th>3</th> <th>2,1</th> <th>108</th> <th>8</th> <th>3</th> <th>2,1</th> <th>08</th>		3-7	Tread, rear		in	mm	8	3	2,1	108	8	3	2,1	08
4-3       Freelift       h <sub>2</sub> in       mm       0       0       0       0       0         4-4       Lift       h <sub>3</sub> in       mm       64-8       16.450       750       19.9		4-1	Mast tilt, forward / backward	α/β	Deg	gree		4	/ 3			4	/ 3	
		4-2	Height, mast lowered	h <sub>1</sub>	in	mm	425		10,	795	476		12,0	95
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		4-3	Freelift	h <sub>2</sub>	in	mm	0	)	(	0	(	)	0	
44-2       Lift maximum (3)       h1       h1       mm       73       18,768       841       21,368         4-44       Height, mast extended       in       mm       749       19,020       851       21,620         4-74       Height of overhead guard (closed cab)       in       mm       149       3,791       149       3,791       21,620         4-72       Height of overhead guard (closed cab w/ airco)       in       mm       149       3,791       149       3,791 <th></th> <th>4-4</th> <th>Lift</th> <th>h<sub>3</sub></th> <th>in</th> <th>mm</th> <th>64</th> <th>18</th> <th>16,</th> <th>450</th> <th>75</th> <th>50</th> <th>19,0</th> <th>)50</th>		4-4	Lift	h <sub>3</sub>	in	mm	64	18	16,	450	75	50	19,0	)50
4-5       Height, mast extended       in       in       mm       749       19,020       851       21,620         4-71       Height of overhead guard (closed cab)       in       in       mm       149       3,791       149       3,791         4-72       Height of overhead guard (closed cab w/ strobe light)       in       in       mm       149       3,791       149       3,791         4-74       Height of overhead guard (closed cab w/ strobe light)       in       in       mm       149       3,791       149       3,791         4-74       Height of overhead guard (closed cab w/ strobe light)       in       in       mm       104       2,650       104       2,550         4-74       Height of overhead guard (closed cab w/ strobe light)       in       in       mm       104       2,650       3,961       156       3,961       4,550         4-19       Overall width across strive tires       b <sub>2</sub> in       mm       162       4,110       171       4,335         4-23       Width across spreader, retracted / extended       m       in       mm       162       4,110       171       4,335         4-33       Ground clearance, lowest point       m,       in       mm		4-4-1	Lift minimum (3)	h <sub>3.1.1</sub>	in	mm	9	1	2,3	318	9	1	2,3	18
4-7-1       Height of overhead guard (closed cab) / alroo)       in       mm       149       3,791       149       3,791         4-7-2       Height of overhead guard (closed cab w/ alroo)       in       mm       149       3,791       149       3,791         4-7-3       Height of overhead guard (closed cab w/ strobe light)       in       mm       149       3,791       149       3,791         4-7-4       Height of overhead guard (closed cab w/ strobe light)       in       mm       156       3,961       3,791         4-8       Seat height to SIP (3) (4)       h,       in       mm       156       3,961       2,850       104       2,850       59,264       36,52       9,264       46,53       59,264       435       59,264       46,52       59,264       46,52       59,264       435       59,264       435       59,264       6,824       269       6,824       269       6,824       269       6,824       269       6,824       240       6,084       481       12,218       240       6,084       481       12,218       240       6,084       481       12,218       240       6,084       481       10,614       400       10,144       418       10,614       400       10,614 <th></th> <th>4-4-2</th> <th>Lift maximum (3)</th> <th>h<sub>3.1.2</sub></th> <th>in</th> <th>mm</th> <th>73</th> <th>39</th> <th>18,</th> <th>768</th> <th>84</th> <th>11</th> <th>21,3</th> <th>868</th>		4-4-2	Lift maximum (3)	h <sub>3.1.2</sub>	in	mm	73	39	18,	768	84	11	21,3	868
4-7-2 4-7-3Height of overhead guard (closed cab w/ strobe light)ininmm14 y3,79114 y3,791<		-			in	mm	749				85	51	21,6	620
4-7-3       Height of overhead guard (closed cab w/ strobe light)       in       in       mm       149       3,791       149       3,791         4-7-4       Height of overhead guard (closed cab w/ work lights)       in       in       mm       156       3,961       156       3,961         4-8       Seat height to SIP (3) (4)       hp,       in       mm       104       2,650       104       2,650         4-19       Overall leight       Linght to face of spreader       lp       in       mm       365       9,264       365       9,264         4-20       Overall width across spreader, retracted / extended       lp       in       mm       162       4,110       171       4,335         4-23       Width across spreader, retracted / extended       in       mm       mm       12       293       12       293         4-33       Ground clearance, lowest point       mn,       in       mm       15       383       15       383         4-34       Aisle width with 40° container; no operating clearance * REDUCED / FULL stroke       Ast <sub>10</sub> in       mm       16,614       400       10,144       418       10,614       400       10,144         4-33       Aisle width with 40° container;					in	mm			3,7	791				
						mm								
420       Length to face of spreader       I <sub>2</sub> in       mm       269       6,824       269       6,824       426       6,824         421       Overall width across drive tires       b <sub>2</sub> in       mm       10       12       4,110       171       4,335         423       Width across spreader, retracted / extended       retracted / extended       m       mm       240       6,084       481       12,218       24/       6,084         430       Sideshift       m       mm       +/-24       +/-60       +/-24       +/-24       +/-24       +/-24       -/-28	S		· · · · · · · · · · · · · · · · · · ·											
420       Length to face of spreader       I <sub>2</sub> in       mm       269       6,824       269       6,824       426       6,824         421       Overall width across drive tires       b <sub>2</sub> in       mm       10       12       4,110       171       4,335         423       Width across spreader, retracted / extended       retracted / extended       m       mm       240       6,084       481       12,218       24/       6,084         430       Sideshift       m       mm       +/-24       +/-60       +/-24       +/-24       +/-24       +/-24       -/-28	SION		<b>o v v v v v v v v v v</b>											
420       Length to face of spreader       I <sub>2</sub> in       mm       269       6,824       269       6,824       426       6,824         421       Overall width across drive tires       b <sub>2</sub> in       mm       10       12       4,110       171       4,335         423       Width across spreader, retracted / extended       retracted / extended       m       mm       240       6,084       481       12,218       24/       6,084         430       Sideshift       m       mm       +/-24       +/-60       +/-24       +/-24       +/-24       +/-24       -/-28	ENS								· · ·					
4-21       Overall width across drive tires       b2       in       mm       162       4,11       171       4,33         4-23       Width across spreader, retracted / extended       in       mm       240       6,084       481       12,218       24/-       6,084         4-30       Sideshift       in       mm       mt/-24       +t/-60       +t/-6	DIM		5											
4-23       Width across spreader, retracted / extended       in       mm       240       6,084       481       12,218       240       6,084         4-30       Sideshift       in       mm       mm       +/-24       +/-600       +/-24       +/-600         4-31       Ground clearance, lowest point       m₁       in       mm       12       293       12       293         4-32       Ground clearance, center of wheelbase       m₂       in       mm       15       383       15       383         4-33       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke       Asta       in       mm       418       10,614       400       10,144       418       10,614       400       10,144         4-34       Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke       Asta       in       mm       558       14,180       566       13,875       558       14,180       546       13,875         4-35       Internal turning radius, reduced / full stroke       Wa       in       mm       628       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       26       6511				-					.,					
4-30       Sideshift       In       mm $+I/-24$ $+I/-600$ $+I/-24$				b <sub>2</sub>										
4.31       Ground clearance, lowest point       m <sub>1</sub> in       mm       12       293       12       293       12       293         4.32       Ground clearance, center of wheelbase       m <sub>2</sub> in       mm       18       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       438       400       10,144       438       400       10,144       438       10,614       400       10,144       438       10,614       400       10,144       438       10,614       400       10,144       438       10,614       400       10,144       438       10,614       400       10,144       438       10,614       400       10,144       438       10,614       400       10,144       438       10,614       400       10,144       430       10,875       588       14,180       568       6,797       249       6,327       268       6,797 <td< th=""><th></th><th></th><th>• •</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>			• •											
4-32       Ground clearance, center of wheelbase       m2       in       mm       15       383       15       383         4-33       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>20</sub> in       mm       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       418       10,614       400       10,144       438       400       10,144       438       400       10,144       438       400       10,144       438       400       10,144       438       400       10,144       438       400       10,144       438       430       568       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268 <th></th> <th></th> <th></th> <th>-</th> <th></th>				-										
4-33       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>20</sub> in       mm       418       10,614       400       10,144       418       10,614       400       10,144         4-33       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>20</sub> in       mm       558       14,180       546       13,875       558       14,180       546       13,875         4-35       Outside turning radius, reduced / full stroke       Wa       in       mm       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       651         PERFORMANCE       Travel speed, with / without load       Travel speed, wi			· · ·											
4-34       Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>40</sub> in       mm       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       14,180       546       13,875       558       16,327       249       6,327       249       6,327       249       6,327       249       6,327       249       6,327       248       150       25       150       25       150       75       753       150       25       150       75       75       75       75       75		-		-				-				-		
4-35       Outside turning radius, reduced / full stroke       Wa       in       mm       268       6,797       249       6,327       268       6,797       249       6,327         4-36       Internal turning radius, reduced / full stroke       b13       in       mm       64       1,619       30       763       59       1,507       268       6,327         PERFORMANCE       Tier 3 / Stage IIIA         5-1       Travel speed, with / without load       mph       km/h       12.4       20       15.5       25       12.4       20       15.5       25         5-2       Lifting speed, with / without load       ft/min       m/s       100       0.51       132       0.67       91       0.46       120       0.61         5-3       Lowering speed with / without load       ft/min       m/s       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       1										· ·		,		
4-36       Internal turning radius, reduced / full stroke       b13       in       mm       64       1,619       30       763       59       1,507       26       651         FERFORMANCE       Tier 3 / Stage IIIA         5-1       Travel speed, with / without load       mph       km/h       12.4       20       15.5       25       12.4       20       15.5       25         5-2       Lifting speed, with / without load       ft/min       m/s       100       0.51       132       0.67       91       0.46       120       0.61         5-3       Lowering speed with / without load       ft/min       m/s       108       0.55														
PERFORMANCE         Tier 3 / Stage IIIA           5-1         Travel speed, with / without load         mph         km/h         12.4         20         15.5         25         12.4         20         15.5         25           5-2         Lifting speed, with / without load         ft/min         m/s         100         0.51         132         0.67         91         0.46         120         0.61           5-3         Lowering speed with / without load         ft/min         m/s         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         149         149         149         149         149         149         149         149         149         140,000         178         40,500         180         180         136 / 36         31 / 35         31 / 35         31 / 35         31 / 35         31 / 35         31 / 35         31 / 35				u						<i>'</i>				
5-1         Travel speed, with / without load         mph         km/h         12.4         20         15.5         25         12.4         20         15.5         25           5-2         Lifting speed, with / without load         ft/min         m/s         100         0.51         132         0.67         91         0.46         120         0.61           5-3         Lowering speed with / without load         ft/min         m/s         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         108         0.55         149         149           5-6         Drawbar pull - max, with / without load         Ib         KN         43,200         192         43,600         194         40,000         178         40,500         180           5-7         Gradeability - 1 mph (1.6 km/h), with / without load (5)         % <th></th> <th></th> <th></th> <th>- 13</th> <th></th> <th></th> <th></th> <th>1000</th> <th></th> <th></th> <th></th> <th>1</th> <th></th> <th></th>				- 13				1000				1		
5-7 Gradeability - 1 mph (1.6 km/h), with / without load (5) % 36 / 36 31 / 35					mph	km/h	12.4			25	12.4			25
5-7 Gradeability - 1 mph (1.6 km/h), with / without load (5) % 36 / 36 31 / 35	NCE	5-2	Lifting speed, with / without load		ft/min	m/s	100	0.51	132	0.67	91	0.46	120	0.61
5-7 Gradeability - 1 mph (1.6 km/h), with / without load (5) % 36 / 36 31 / 35	MA	5-3	Lowering speed with / without load		ft/min	m/s	108	0.55	108	0.55	108	0.55	108	0.55
5-7 Gradeability - 1 mph (1.6 km/h), with / without load (5) % 36 / 36 31 / 35	FOR	5-5	Drawbar pull - 1 mph (1.6 km/h), with / without load		lb	kN	35,700	159	36,200	161	33,000	147	33,500	149
5-7         Gradeability - 1 mph (1.6 km/h), with / without load (5)         %         36 / 36         31 / 35	ER	5-6	Drawbar pull - max, with / without load		lb	kN	43,200	192	43,600	194	40,000	178	40,500	180
5-8         Gradeability - max, with / without load (5)         %         45 / 36         39 / 35		5-7	Gradeability - 1 mph (1.6 km/h), with / without load (5)		9	6		36	/ 36			31	/ 35	
		5-8	Gradeability - max, with / without load (5)		9	6		45	/ 36			39	/ 35	

# H200XD-ECD7 | H190XD-ECD8 SPECIFICATIONS

Image: 10       Manufacture matrix (direction)       Manufacture matrix (direction)       Manufacture matrix (direction)       Matrix (directi		1-1	Manufacturer					ЦVC	TED			ЦУС	TED	
Image: Proceeding of the stand         Image:														
Perform         Operation hysic depends on his cambin, nominal (1) AM         Dis         Solution         Soluti			5 ( )											
Best         Load capacity and canter, nominal (1) AM         C         in	_													
Image         Image <t< th=""><th>ERA</th><th></th><th></th><th>0</th><th>lh</th><th>ka</th><th>20</th><th></th><th></th><th>172</th><th>10</th><th></th><th></th><th>18</th></t<>	ERA			0	lh	ka	20			172	10			18
Image         Image <t< th=""><th>EN</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	EN													
1       Weekbase       y       in       mm       177       4.500       77       4.500         21       Service weight       0       16       0       6       4       6       10       kg       87       77       4.500       20.53       40.852         22       Ace leading with lad, front / rear       0       10       kg       87.71       80.857       30.80       80.873       30.873       <	9												,	
1         0		_												
Image: second secon				y					· · ·	,00			· · ·	,00
B       ks       ks <th< th=""><th></th><th>ļ</th><th>0 0 0</th><th></th><th></th><th></th><th>97</th><th></th><th></th><th>168</th><th>00</th><th></th><th></th><th>852</th></th<>		ļ	0 0 0				97			168	00			852
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	GFI										,			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	MEI					-							.,	
Tresce, front         Image: fro							55,102		1	14,400	02,323			14,000
1       1		_			i y	he 								
3         Tread, front         b <sub>0</sub> in         m         129         3.282         129         3.282           3.7         Tread, rear         b <sub>11</sub> in         mm         3.78         1.083         3.2108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         8.218         8.3         8.218         8.4         8.4         8.4         8.4         8.4         8.4         9.435         4.25         10.75         4.42         10.71         1.92         4.7         1.92         4.7         1.92         4.7         1.92         4.7         1.92         4.7         1.92         4.7         1.92         3.791         1.49         3.791         1.49         3.791         1.92         4.7         1.92         4.7         1.92         3.71         1.92         3.71         1.92         3.	LS													
3         Tread, front         b <sub>0</sub> in         m         129         3.282         129         3.282           3.7         Tread, rear         b <sub>11</sub> in         mm         3.78         1.083         3.2108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         2.108         8.3         8.218         8.3         8.218         8.4         8.4         8.4         8.4         8.4         8.4         9.435         4.25         10.75         4.42         10.71         1.92         4.7         1.92         4.7         1.92         4.7         1.92         4.7         1.92         4.7         1.92         4.7         1.92         3.791         1.49         3.791         1.49         3.791         1.92         4.7         1.92         4.7         1.92         3.71         1.92         3.71         1.92         3.	HEE				#									
3.7       Tread, rear       b <sub>1</sub> in       mm       83       2,108       83       2,108         4.1       Mast tilt, forward / backward $\alpha / \beta$ Degree $4/3$ $V = 4/3$ $V = 4/3$ $V = 4/3$ 4.2       Height, mast lowered       h, in       mm       0       0       0       0       0       0         4.4       Lift       minumu (3)       h, in       mm       643       16,320       745       18,850       648       16,450       1,441         4.4.4       Lift maximum (3)       h <sub>212</sub> in       mm       643       16,322       7455       18,927       19,020	N			b		mm	11			282	11			182
4-2       Height, mast lowered       h <sub>1</sub> in       mm       374       9.495       425       10.795         4-3       Freelift       h <sub>2</sub> in       mm       0       0       0       0       0         4-44       Lift       min       mm       545       13.850       644       16.450         4-44       Lift       min       mm       97       2.472       97       2.472         4-44       Lift       min       mm       646       16.420       749       19.922         4-5       Height, mast extended       m       mm       646       16.420       749       19.922         4-73       Height of overhead guard (closed cab w/ airco)       in       mm       149       3.791       149       3.791         4-73       Height of overhead guard (closed cab w/ work lights)       in       mm       104       2.650       104       2.650         4-74       Height of overhead guard (closed cab w/ work lights)       in       mm       104       2.650       104       2.650         4-74       Height of overhead guard (closed cab w/ work lights)       in       mm       104       2.650       104       2.650       104									· · ·	00	0		· · ·	00
4.3       Freelift       h2       in       mm       0       0       0       0       0       0       0         4.44       Lift       h3       in       mm       545       13.850       648       16.450         4.44       Lift       min       m9       7       2.472       97       2.472         4.44       Lift       min       mm       643       16.322       745       18.922         4.44       Lift       min       mm       646       16.420       749       19.020         4.74       Height of overhead guard (closed cab)       in       mm       149       3.791       149       3.791         4.72       Height of overhead guard (closed cab w/ sirco)       in       mm       149       3.791       149       3.791         4.73       Height of overhead guard (closed cab w/ work lights)       in       mm       166       3.861       156       63.881       16       2.50         4.74       Height of overhead guard (closed cab w/ work lights)       in       mm       104       2.650       104       2.650       104       2.650         4.74       Height of overhead guard (closed cab w/ work lights)       in <td< th=""><th></th><th>-</th><th></th><th></th><th></th><th></th><th>3</th><th></th><th></th><th>195</th><th>4</th><th></th><th></th><th>795</th></td<>		-					3			195	4			795
444       Lift minimum (3)       h       h       n       m       97       2,472       97       2,472         4-42       Lift maximum (3)       h       h       in       mm       643       16,322       745       18,922         4-5       Height, mast extended       in       mm       646       16,420       749       19,020         4-7       Height of overhead guard (closed cab)       in       mm       149       3,791       149       3,791         4-7.2       Height of overhead guard (closed cab wisrobe light)       in       in       mm       149       3,791       149       3,791         4-7.4       Height of overhead guard (closed cab wisrobe light)       in       mm       149       3,791       149       3,791         4-7.4       Height of overhead guard (closed cab wisrobe light)       in       mm       164       3,961       156       3,961       156       3,961       4.56       104       2,550         4-83       Seat height to foverhead guard (closed cab wisrbe light)       in       mm       162       4,110       162       4,110       162       4,110       162       4,110       162       4,110       162       4,100       14,200 <t< th=""><th></th><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>				-										
44-2       Lift maximum (3)       h       h       h       in       mm       643       16,322       745       18,922         4-7.4       Height, for werhead guard (closed cab)       in       mm       149       3,791       149       3,791       149       3,791         4-7.2       Height of overhead guard (closed cab w/ sirco)       in       mm       149       3,791       149       3,791       149       3,791         4-7.4       Height of overhead guard (closed cab w/ sirco)       in       mm       149       3,791       149       3,791       149       3,791         4-7.4       Height of overhead guard (closed cab w/ sirco)       in       mm       165       3,961       155       3,961       3,791       149       3,791         4-7.4       Height of overhead guard (closed cab w/ sirco)       in       mm       165       3,961       155       3,961       155       3,961       155       3,961       155       3,961       16,362       10,966       3,961       16,365       3,961       16,365       10,966       16,456       3,961       16,365       10,966       10,966       10,966       10,966       10,966       10,966       10,966       10,966       10,966		-					-							
4-5       Height, mast extended       in       mm       646       16,42∪       749       19,02∪         4-7.1       Height, mast extended       in       mm       149       3,791       149       3,791       149       3,791         4-7.2       Height of overhead guard (closed cab w/ arco)       in       mm       149       3,791       149       3,791       43       3,791       449       3,791       43       3,791       449       3,791       449       3,791       449       3,791       449       3,791       449       3,791       449       3,791       449       3,791       449       3,791       449       3,791       449       3,791       43       5,961       156       3,961       156       3,961       4.56       104       2,50       449       Verall length       16       mm       106       mm       162       4,110       16       4.50       104       2,50       4.10       4.50       4.10       4.50       4.10       4.50       4.10       4.10       4.10       4.10       4.10       4.50       4.10       4.50       4.10       4.10       4.10       4.10       4.10       4.10       4.10       4.10       4.10				h										
4-7.1       Height of overhead guard (closed cab) (airco)       in       nm       149       3,791       149       3,791         4-7.2       Height of overhead guard (closed cab w/ strobe light)       in       nm       149       3,791       149       3,791         4-7.3       Height of overhead guard (closed cab w/ strobe light)       in       nm       mm       149       3,791       149       3,791         4-7.4       Height of overhead guard (closed cab w/ work lights)       in       nm       nm       mm       156       3,961       156       3,961         4-8       Seat height to SIP (4)       Seat height to SIP (4)       hy       in       mm       104       2,650       104       2,650         4-19       Overall width across drive tires       lp       in       mm       mm       267       6,776       267       6,776         4-20       Length to face of spreader       lp       in       mm       mm       162       4,110       16       4,110       16       4,110       16       4,110       16       1,566       308       1,500       12,700       259       6,566       500       12,700       259       6,566       500       12,700       259       6,566 <th></th> <th></th> <th></th> <th>13.1.2</th> <th></th> <th></th> <th>-</th> <th></th> <th>- 1</th> <th></th> <th></th> <th></th> <th></th> <th></th>				13.1.2			-		- 1					
4-72       Height of overhead guard (closed cab w/ sirco)       in       in       mm       149 $3,791$ 149 $3,791$ 4-7.3       Height of overhead guard (closed cab w/ strobe light)       in       in       mm       149 $3,791$ 149 $3,791$ 4-7.4       Height of overhead guard (closed cab w/ strobe light)       in       in       mm       149 $3,791$ 149 $3,791$ 4-7.4       Height of overhead guard (closed cab w/ work lights)       in       in       mm       149 $3,961$ 156 $3,961$ $3,961$ $3,961$ $3,961$ $4,92$ $3,961$ $4,92$ $3,961$ $149$ $3,791$ $149$ $3,791$ $4,92$ $3,961$ $149$ $3,791$ $4,92$ $3,961$ $149$ $3,791$ $4,92$ $3,961$ $160$ $3,961$ $160$ $3,961$ $2,650$ $010 + 2,250$ $2,650$ $010 + 2,250$ $6,776$ $267$ $6,776$ $267$ $6,776$ $259$ $6,566$ $500$ $12,700$ $259$ $6,566$ $500$ $12,700$ $259$ $6,566$ $500$ $12,700$ $259$		_												
4-73       Height of overhead guard (closed cab w/ strobe light)       in       mm       149 $3,791$ 149 $3,791$ 4-74       Height of overhead guard (closed cab w/ work lights)       in       mm       156 $3,961$ 156 $3,961$ 156 $3,961$ 4-73       Height of overhead guard (closed cab w/ work lights)       h       in       mm       104 $2,650$ 104 $2,650$ 4-43       Seat height to SIP (4)       h       in       mm       104 $2,650$ 104 $2,650$ 4-20       Length to face of spreader       L       in       mm $365$ $9,264$ $363$ $9214$ 4-21       Overall width across drive tires       b2       in       mm $162$ $4,110$ $162$ $4,110$ $162$ $4,110$ $162$ $4,110$ $162$ $4,110$ 4-32       Sideshift       retracted / extended       in       mm $12/24$ $4+/24$ $4+/20$ $4+/24$ $4+/24$ $4+/24$ $4+/24$ $4+/24$ $4+/24$ $4+/24$ $4+/24$ $4+/24$ $4+/24$ $4+/24$ $4+/24$ $4+/24$			5 5 ( )						· · ·				· · · · · ·	
47-4       Height of overhead guard (closed cab w/ work lights)       in       mm       156       3,961       156       3,961         4.8       Seat height to SIP (4)       h <sub>7</sub> in       mm       104       2,650       104       2,650         4.9       Overall length       I <sub>1</sub> in       mm       365       9,264       363       9214         4.90       Overall width across drive tires       I <sub>2</sub> in       mm       365       9,264       363       9214         4.20       Length to face of spreader       I <sub>2</sub> in       mm       365       9,264       363       9214         4.23       Width across drive tires       I <sub>2</sub> in       mm       162       4,110       162       4,110         4.33       Ground clearance, lowest point       m <sub>1</sub> in       mm       17       182       293       12       293         4.33       Aisle width with 40° container; no operating clearance * REDUCED / FULL stroke       Ast <sub>0</sub> in       mm       15       383       15       532         4.33       Aisle width with 40° container; no operating clearance * REDUCED / FULL stroke       Ast <sub>0</sub> in       mm       164       10,056       398		-	· · · · · · · · · · · · · · · · · · ·											
4.8       Seat height to SIP (4) $h_7$ in       mm $104$ $2.65$ $104$ $2.65$ 4.19       Overall length       I,       in       mm $365$ $9.264$ $363$ $9214$ 4.20       Length to face of spreader       I,       in       mm $267$ $6.776$ $267$ $6.776$ $227$ $6.776$ 4.21       Overall width across drive tires $b_2$ in       mm $226$ $6.566$ $500$ $12.700$ $259$ $6.566$ $500$ $12.700$ 4.33       Ground clearance, lowest point       m,       m,       in       mm $12^{-2}$ $23^{-3}$ $12^{-2}$ $23^{-3}$ 4.32       Ground clearance, lowest point       m,       in       mm $15^{-2}$ $38^{-3}$ $15^{-5}$ $38^{-3}$ 4.33       Aisle width with $20^{\circ}$ container, no operating clearance * REDUCED / FULL stroke       Ast <sub>o</sub> in       mm $416^{-1}$ $10.566^{-3}$ $38^{-1}$ $15^{-5}$ $38^{-3}$ 4.33       Aisle width with $40^{\circ}$ container, no operating clearance * REDUCED / FULL stroke       Ast <sub>o</sub> in       mm       <	SNO		с с ( с,											
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	NSI		5 5 X	h,										
G       4.20       Length to face of spreader $1_2$ in       mm       267 $6,776$ 267 $6,776$ 4.21       Overall width across drive tires $b_2$ in       mm       162 $4,110$ 162 $4,110$ 4-23       Width across spreader, retracted / extended       in       mm       259 $6,566$ 500 $12,700$ $24,110$ $162$ $4,110$ 4-23       Width across spreader, retracted / extended       in       mm $259$ $6,566$ $500$ $12,700$ $4,170$ $4,170$ 4-30       Sideshift       m       mm $+7.24$ $+7.600$ $+7.24$ $+7.600$ $+7.24$ $+7.600$ 4-33       Ground clearance, lowest point       m,       in       mm $12$ $93.3$ $15$ $38.3$ 4-33       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke $At_{50}$ in       mm $416$ $10,566$ $398$ $10,096$ $416$ $10,566$ $398$ $10,096$ $416$ $10,566$ $398$ $10,096$ $416$ $10,566$ $398$ $10,096$	ME		5 (7						· · · ·				· · · ·	
4-21       Overall width across drive tires       b2       in       mm       162       4,110       162       4,110         4-23       Width across spreader, retracted / extended       in       mm       259       6,566       500       12,700       259       6,566       500       12,700         4-30       Sideshift       in       mm       +/-24       +/-500       +/-24 </th <th>0</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>20</th> <th>67</th> <th></th> <th></th> <th>20</th> <th>67</th> <th></th> <th></th>	0						20	67			20	67		
4-23       Width across spreader, retracted / extended       in       mm       259       6,566       500       12,700       259       6,566       500       12,700         4-30       Sideshift       in       mm       mm       +/-24       +/-60       +/-24       +/-60         4-31       Ground clearance, lowest point       m1       in       mm       12       293       12       293       12       293         4-32       Ground clearance, center of wheelbase       m2       in       mm       12       12       293       15       383       15       383         4-33       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>20</sub> in       mm       416       10,566       398       10,096       416       10,566       398       10,096         4-34       Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>40</sub> in       mm       566       14,382       554       14,081       566       14,382       554       14,081       30       763       64       16,19       30       763         4-35       Outside turning radius, reduced / full stroke       b1       in       mm       64       16,19				-		mm	10	62	· · ·		16	62	· · · ·	
4-30       Sideshift       In       mm       +/-24       +//-600       +/-24       +/-600       +/-24       +/-600         4-31       Ground clearance, lowest point       m1       in       mm       12       293       12       293       12       293         4-32       Ground clearance, center of wheelbase       m2       in       mm       16       10,566       398       10,096       416       10,566       398       10,096       416       10,566       398       10,096       443       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>20</sub> in       mm       416       10,566       398       10,096       416       10,566       398       10,096         4-33       Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>40</sub> in       mm       566       14,382       554       14,081       366       14,382       554       14,081       30       763         4-34       Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke       Ma       in       mm       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       25 <th></th> <th>4-23</th> <th>Width across spreader, retracted / extended</th> <th>2</th> <th>in</th> <th>mm</th> <th>259</th> <th>6,566</th> <th>500</th> <th>12,700</th> <th>259</th> <th>6,566</th> <th>500</th> <th>12,700</th>		4-23	Width across spreader, retracted / extended	2	in	mm	259	6,566	500	12,700	259	6,566	500	12,700
4-32       Ground clearance, center of wheelbase       m2       in       mm       1       33       1       33       33         4-33       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>20</sub> in       mm       416       10,566       398       10,096       416       10,566       398       10,096       446       10,566       398       10,096       446       10,566       398       10,096       446       10,566       398       10,096       446       10,566       398       10,096       446       10,566       398       10,096       446       14,081       566       14,382       554       14,081       566       14,382       554       14,081       566       14,382       564       14,081       566       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       16,19       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       753       15       25       12.4       20       15.5       25       12.4 <th></th> <th></th> <th></th> <th></th> <th>in</th> <th>mm</th> <th>+/-</th> <th></th> <th>+/-(</th> <th></th> <th>+/-</th> <th></th> <th></th> <th></th>					in	mm	+/-		+/-(		+/-			
4-32       Ground clearance, center of wheelbase       m2       in       mm       1       33       1       33       33         4-33       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>20</sub> in       mm       416       10,566       398       10,096       416       10,566       398       10,096       446       10,566       398       10,096       446       10,566       398       10,096       446       10,566       398       10,096       446       10,566       398       10,096       446       10,566       398       10,096       446       14,081       566       14,382       554       14,081       566       14,382       554       14,081       566       14,382       564       14,081       566       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       6,797       249       6,327       268       16,19       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       753       15       25       12.4       20       15.5       25       12.4 <th></th> <th>4-31</th> <th>Ground clearance, lowest point</th> <th>m,</th> <th>in</th> <th>mm</th> <th>1</th> <th>2</th> <th>29</th> <th>93</th> <th>1</th> <th>2</th> <th>29</th> <th>93</th>		4-31	Ground clearance, lowest point	m,	in	mm	1	2	29	93	1	2	29	93
4-33       Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>20</sub> in       mm       416       10,566       398       10,096       416       10,566       398       10,096         4-34       Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>40</sub> in       mm       566       14,382       554       14,081       566       14,382       554       14,081         4-35       Outside turning radius, reduced / full stroke       Wa       in       mm       644       1,619       30       763       644       1,619       30       763       644       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       753       54       14,041				m <sub>2</sub>	in	mm	1	5	38	33	1	5	38	33
4-34       Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke       Ast <sub>40</sub> in       mm       566       14,382       554       14,081       566       14,382       554       14,081         4-35       Outside turning radius, reduced / full stroke       Wa       in       mm       268       6,797       249       6,327       268       6,797       249       6,327         4-36       Internal turning radius, reduced / full stroke       b <sub>13</sub> in       mm       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       753       14,90       15,5       25       12,4       20       15,5       25       15,5       14,90       16,90       16,90 <td< th=""><th></th><th></th><th></th><th></th><th>in</th><th>mm</th><th>416</th><th>10,566</th><th>398</th><th>10,096</th><th>416</th><th>10,566</th><th>398</th><th>10,096</th></td<>					in	mm	416	10,566	398	10,096	416	10,566	398	10,096
4-35       Outside turning radius, reduced / full stroke       Wa       in       mm       268       6,797       249       6,327       268       6,797       249       6,327         4-36       Internal turning radius, reduced / full stroke       b13       in       mm       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       763       64       1,619       30       1,61       51       54       1,619       30       1,61       51       54       1,63       54       1,63       1,61<		4-34	Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke		in	mm	566	14,382	554	14,081	566	14,382	554	14,081
4-36       Internal turning radius, reduced / full stroke       b13       in       mm       64       1,619       30       763       65       55       55		4-35	Outside turning radius, reduced / full stroke		in	mm	268	6,797	249	6,327	268	6,797	249	6,327
5-1       Travel speed, with / without load       mph       km/h       12.4       20       15.5       25       12.4       20       15.5       25         5-2       Lifting speed, with / without load       ft/min       m/s       91       0.46       120       0.61       91       0.46       120       0.61         5-3       Lowering speed with / without load       ft/min       m/s       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       108       0.55       149       0.46       140       0.55       149       0.46       140       0.55       148       0.55       108       0.55       148       0.55       148       0.55       149       0.40       147       0.50       149       0.56       149       0.50       149       0.50       149       0.50       149       0.50       149 <th< th=""><th></th><th>4-36</th><th>Internal turning radius, reduced / full stroke</th><th>b<sub>13</sub></th><th>in</th><th>mm</th><th>64</th><th>1,619</th><th>30</th><th>763</th><th>64</th><th>1,619</th><th>30</th><th>763</th></th<>		4-36	Internal turning radius, reduced / full stroke	b <sub>13</sub>	in	mm	64	1,619	30	763	64	1,619	30	763
5-2       Lifting speed, with / without load       ft/min       m/s       91       0.46       120       0.46       120       0.61         5-3       Lowering speed with / without load       ft/min       m/s       108       0.55       149       140		PERFO	DRMANCE					Tier 3 / S	Stage IIIA			Tier 3 / S	tage IIIA	
5-3       Lowering speed with / without load       ft/min       m/s       108       0.55       149       149       149       149       149       149       149       149       149       140	ш	5-1	Travel speed, with / without load		mph	km/h	12.4	20	15.5	25	12.4	20	15.5	25
5-5       Drawbar pull - 1 mph (1.6 km/h), with / without load       Ib       kN       33,300       148       33,500       149       33,000       147       33,500       149         5-6       Drawbar pull - max, with / without load       Ib       kN       40,000       178       40,500       180       40,000       178       40,000       178       40,000       180	NC				ft/min	m/s	91		120		91	0.46	120	0.61
5-6       Drawbar pull - max, with / without load       Ib       kN       40,000       178       40,000       178       40,000       178       40,000       180         5-7       Gradeability - 1 mph (1.6 km/h), with / without load (5)       %       33 / 39       32 / 38       32 / 38	RMA		Lowering speed with / without load		ft/min	m/s								0.55
5-7         Gradeability - 1 mph (1.6 km/h), with / without load (5)         %         33 / 39         32 / 38	FOF	_			lb	kN	33,300	148	33,500	149	33,000	147	33,500	149
	PER	5-6	Drawbar pull - max, with / without load		lb	kN	40,000	178	40,500	180	40,000			180
5-8         Gradeability - max, with / without load (5)         %         41 / 39         39 / 38			Gradeability - 1 mph (1.6 km/h), with / without load (5)											
		5-8	Gradeability - max, with / without load (5)		9	0		41	/ 39			39	/ 38	

# H210XD-ECD8 | H230XD-ECD8 | H230XD-ECD9 SPECIFICATIONS

	1-1	Manufacturer					HYS	TED				STER			LIVC	STER		
	1-1	Manufacturer Model designation (AM)					H210XI									D-ECD9		
	1-2	<b>U</b>					Die			H230XD-EC8 Diesel				Diesel				
_	1-3	Powertrain / drivetrain						ited		Seated						ated		
RA		Operator type	0	lh	ka	21		9,525 23,000					23,000			100		
GENERAI	1-5 1-6	Load capacity at load center, nominal (1) AM Load center	Q	lb	kg		000 8			48		10,433		48		10,433 1,220		
9	1-0	Load distance	C	in	mm		o 2		220 309	4		1,220			o 2	1,2		
	1-0	Wheelbase	X	in in	mm mm	17			500 500	17			500		77	4,5		
	1-9		У	#	#	14	7+1/	· · ·	000	11	-	· · ·	000	14		· · ·	00	
		Container stacking height, 8'6" / 9'6"				00			000			/6+1	0.47	07		/7+1	100	
E	2-1			lb	kg	92,		41, 21.427	886	94,4		42, 22.436	847	. ,	440	44, <sup>2</sup> 22.024	9.990	
WEIGHT	2-2	Axle loading with load, front / rear AM		lb	kg	92,960	1	,	9,719	96,408	43,730	,	10,177	99,664	1.1.1	1.	-,	
_	2-3 3-1	Axle loading without load, front / rear		lb Tu	kg	58,524		33,817	15,339	58,528	26,548		16,299	61,785		35,653	16,172	
	3-1	Tire type Tire size, front		Ту	be		Pneuma 14.00					<mark>atic radial</mark> 0-R24				i <mark>tic radial</mark> )-R24		
S							14.00					0-R24						
NHEELS	3-3	Tire size, rear												14.00-R24				
N	3-5	Number of tires, front / rear ( X driven )	h	#				/ 2 x4 3.507 138		· ·	07			/2	07			
	3-6 3-7		Ь <sub>10</sub>	in	mm		38	3,5					507		38	3,5		
		,	b <sub>11</sub>	in °	mm	8	3	2,° / 3	108	8		/3	108	8	3	2,1	00	
	4-1 4-2	Mast tilt, forward / backward Height, mast lowered	α/β	in	mm	A	47 25		795	42		1	795	4		12,005		
	4-2	0	h <sub>1</sub>	in	mm			- /	795 D	42		- /	795 D			12,095 0		
	4-3	Lift	h <sub>2</sub> h <sub>3</sub>	in	mm		0		450	648		16,450		0 750		19,050		
	4-4-1	Lift minimum (3)		in	mm		648 97		430 172	97		2,472		97		2,472		
	4-4-2	( )	h <sub>3.1.1</sub> h	in	mm	745			922	745		18,922		847		2,472		
	4-5	Height, mast extended	h <sub>3.1.2</sub>	in	mm	74		· · · ·	19.020		749		19.020		851		21,620	
	4-7-1			in	mm		49	3,791		149		3,791		149		3,791		
	4-7-2	<b>o ( )</b>		in	mm		19	· · · ·	791	149		3,791			19	3,791		
	4-7-3	J		in	mm		19	3,791		149		3,791		149		3,7		
10	4-7-4			in	mm		56	3,961		156		3,9		156		3,961		
NO	4-8	о (	h <sub>7</sub>	in	mm	10		2.650		104		2.650		104		2.650		
ISN	4-19		l <sub>1</sub>	in	mm		53 53	9,216		363		9,216		363		9,216		
DIMENSIONS	4-20		-1  2	in	mm	26		6,776		267		6,776		267		6,776		
D	4-21	0	b <sub>2</sub>	in	mm		52	· · · ·	10	17		4,335		171		4.335		
	4-23		-2	in	mm	259	6,566	500	12,700	259	6,566	500	12,700	259	6,566	500	12,700	
	4-30	Sideshift		in	mm		24	+/-	600	+/-			600	+/-	· ·	+/-6	<i>'</i>	
	4-31		m₁	in	mm		2		93	1			93		2	29		
	4-32	Ground clearance, center of wheelbase	m <sub>2</sub>	in	mm		5		83	1			83		5	38		
	4-33	Aisle width with 20' container; no operating clearance * REDUCED / FULL stroke	Ast <sub>20</sub>	in	mm	416	10,566	398	10,096	416	10,566	398	10,096	416	10,566	398	10,096	
	4-34	Aisle width with 40' container; no operating clearance * REDUCED / FULL stroke	Ast <sub>40</sub>	in	mm	566	14,382	554	14,081	566	14,382	554	14,081	566	14,382	554	14,081	
	4-35	Outside turning radius, reduced / full stroke	Wa	in	mm	268	6,797	249	6,327	268	6,797	249	6,327	268	6,797	249	6,327	
	4-36	Internal turning radius, reduced / full stroke	b <sub>13</sub>	in	mm	59	1,507	26	651	59	1,507	26	651	59	1,507	26	651	
		DRMANCE																
	5-1	Travel speed, with / without load		mph	km/h	12.4	20	15.5	25	12.4	20	15.5	25	12.4	20	15.5	25	
NCE	5-2	3		ft/min	m/s	91	0.46	120	0.61	91	0.46	120	0.61	91	0.46	120	0.61	
MA	5-3	Lowering speed with / without load		ft/min	m/s	108	0.55	108	0.55	108	0.55	108	0.55	108	0.55	108	0.55	
PERFORMANCE	5-5	Drawbar pull - 1 mph (1.6 km/h), with / without load		lb	kN	33,000	147	33,500	149	33,000	147	33,500	149	33,000	147	33,300	148	
PE	5-6	Drawbar pull - max, with / without load		lb	kN	40,000	178	40,500	180	39,800	177	40,200	179	39,800	177	40,200	179	
	5-7	Gradeability - 1 mph (1.6 km/h), with / without load (5)		%			30 /					/ 37		28 / 36				
	5-8	Gradeability - max, with / without load (5)		%	0		37 /	37			36	/ 37		35 / 36				

### POWERTRAINS

	1-1	Manufacturer			HYS	TEP	HYS	TER		
	1-2	Model designation			H180-200			KD-ECD7-9		
	1-3	Power type			Die		Die			
	7-1	Engine manufacturer / model			Cummins			/ QSB 6.7		
	7-1a	EPA Tier Compliance			Tier 3 / S		Tier 3 / S			
	7-2	Engine power - rated	hp	kW	220@2200	164@2200	220@2200	164@2200		
NE	7-2-1	Engine - peak	hp	kW	231@2000	172@2200	231@2000	172@2200		
ENGINE	7-3	Rated speed	rpm	rpm	2,2		2,2			
	7-3-1	Engine torque @ rpm (1.min)	lb-ft	N-m	700@1500	949@1500	700@1500	949@1500		
	7-4	Number of cylinders / displacement	# / in3	# / cm3	6 / 408	6 / 6,690	6 / 408	6 / 6,690		
	x	Turbocharger	Ту	ре	Wastegate, v	vater-cooled	Wastegate, v	vater-cooled		
	7-8	Alternator output	Am	ips	12	20	12	20		
	7-9	Electrical system voltage	١	/	2	4	24			
	7-10	Battery voltage, normal capacity	V /	Ah	24 /	102	24 / 102			
	8-0	Drive control / transmission	Ту	oe	Powershift T	ransmission	Powershift Transmission			
	8-1	Type of drive unit	Ту	ре	Torque C	converter	Torque C	Converter		
ш	8-2	Transmission manufacturer / type	Туре		ZF 5W	/G211	F 5W	G211		
DRIVE	8-2-1	Transmission speeds forward / backward	#		5,	3	5.	/ 3		
	8-3	Wheel drive / drive axel manufacturer / type	Ту	ре	AxleTech / PF	RC 1756W3H	AxleTech / Pf	RC 1756W3H		
	8-11	Service brake	Ту	ре	Oil immerse	d (wet) disc	Oil immersed (wet) disc			
	8-12	Parking brake	Ту	ре	Spring applied, dry		Spring applied, dry disc on drive axle			
	9-1	Spreader manufacturer / type	Ту	ре	Elme / 58	6TB MPS	Elme / 58	4LD PPS		
К.	9-1-1	Pile slope, mechanical	in	mm	+/- 8.1	+/- 205	+/- 7.6	+/- 192		
EADE	9-1-2	Pile slope total, powered	Deg		+/-		+/-			
SPREADER	9-3	Size of containers		t	ISO 20		ISO 20			
	9-4	Sideshift (total)	in	mm	+/- 23.6	+/- 600	+/- 23.6	+/- 600		
	9-4-1	Telescoping time, extend/retract	Sec	Sec		10 / 13		/ 13		
	10-1	Operating pressure for attachments	psi	Мра	3,263	22.5	3,263	22.5		
	10-2	Oil volume for attachments	gpm	l/m	19	72	19	72		
MISC	10-3	Hydraulic tank capacity	gal	1	71	268	71	268		
MIS	10-4 10-4-1	Fuel tank capacity	gal		92 N/A	350 N/A	92 N/A	350 N/A		
		DEF/AdBlue Tank capacity	gal					1		
	10-5 10-6	Steering design	Ty		Hydro 5.		Hydrostatic			
	10-6	Number of steering rotations	7	F	5.	.0	5.0			

#### NOTES:

Specifications are affected by the condition of the vehicle and how it is equipped, as well as the nature and condition of the operating area. Inform your dealer of the nature and condition of the intended operating area when purchasing your Hyster® truck.

- (1) Raised cabin may result in reduced capacity since the "carry" height will be higher.
- (2) Minimum/maximum height of twistlocks
- (3) With raised cabin position add 39" / 1000 mm
- (4) SIP to drive axle plus radius of tires to ground using standard tires

Safety: This truck conforms to the

current EU and ANSI requirements.

(5) Gradeability figures are provided for comparison of tractive performance, but are not intended to endorse the operation of vehicle on the stated inclines.

All capacities are according to EN1551.

All specifications and capacities are valid for trucks equipped with a Hyster® container handling spreader for handling ISO containers.

#### NOTICE:

Care must be exercised when handling elevated loads. Operators must be trained and must read, understand and follow the instructions contained in the Operating Manual.

All values are nominal values and they are subject to tolerances. For further information, please contact the manufacturer.

Hyster products are subject to change without notice.

Lift trucks illustrated may feature optional equipment. Values may vary with alternative configurations.

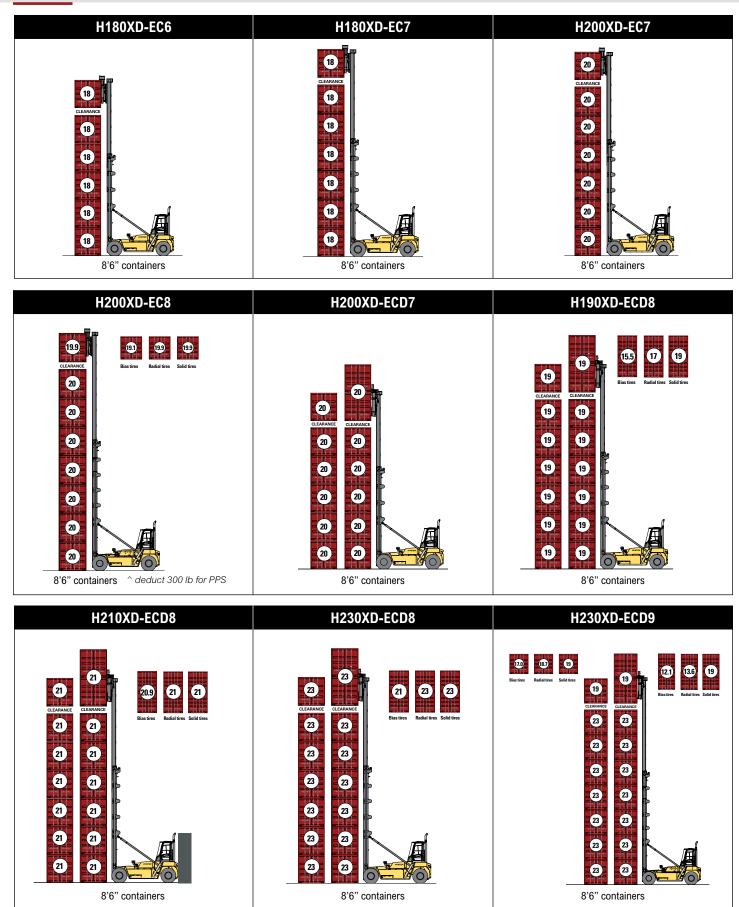
CERTIFICATION: Hyster lift trucks meet the design and construction requirements of B56.1-1969, per OSHA Section 1910.178(a)(2), and also comply with the B56.1 revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck. Performance specifications are for a truck equipped as described under Standard Equipment on this Technical Guide. Performance specifications are affected by the condition of the vehicle and how it is equipped, as well as by the nature, condition of the operating area, proper service and maintenance of the vehicle. If these specifications are critical, the proposed application should be discussed with your dealer.

NOTE: Specifications, unless otherwise listed, are for a standard truck without optional equipment.

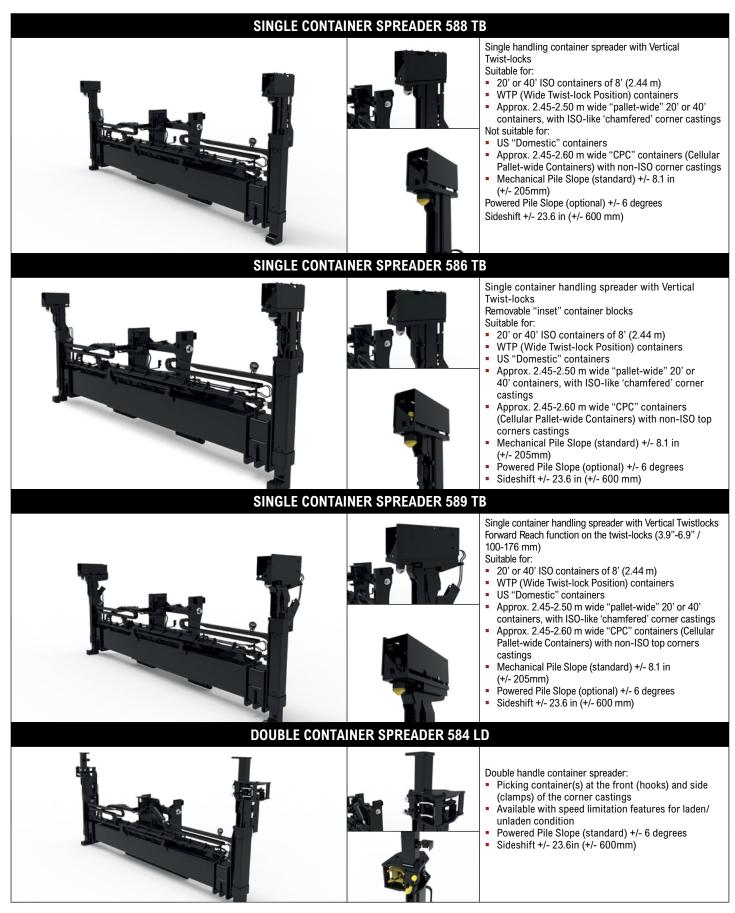
Specification data is based on VDI 2198.

CE

### RATED CAPACITIES AND STACKING HEIGHTS (SHOWN IN 1,000LB)



#### SPREADERS AND ENGAGEMENT SYSTEMS



# FEATURES AND OPTIONS

PERFORMANCE	STD	OPT
Cummins QSB 6.7L diesel engine rated 220 hp tier 3 / 164 kW Stage IIIA	x	
Tier 3 / stage IIIA compliant	х	
Wastegate turbocharger, water cooled	х	
Hibernate idle	х	
Hydraulically driven on-demand cooling fan	х	
120 amp alternator	х	
Powertrain protection system	х	
ZF transmission 5WG211 5-spd fwd / 3-spd reverse auto-shifting	x	
AxleTech drive axle PRC1756 W3H with wet disc brakes	х	
LIFT	STD	ОРТ
On-Demand Load Sensing Hydraulic System	х	
Automatic throttle-up when lifting (in neutral or inching)	х	
Variable lap mast for low roller forces	х	
2 cylinder / 2 chain design	х	
2 Stage Non Free Lift Mast	х	
Mast tilt - 4° Forward / 3° Back	х	
Hydraulic accumulator	х	
Pressure compensated lowering		х
Hydraulic system temperature protection with performance de-rate		х
HANDLING	STD	OPT
Hyster 586TB single spreader, with removable blocks for ISO or wide containers	x	
Hyster 588TB single handling 20-40ft empty container spreader with vertical twist-locks		x
Hyster 589TB single spreader, with hydraulically adjustable head for ISO or wide containers		x
Hyster 584LD double handling 20-40ft empty container spreader with hooks and side clamps*	x	
Mast lift height sensor		х
Mechanical pile slope	х	~
Powered pile slope*	~	х
Automatic one-touch extend/retract (20'/40') for spreader		x
Mast tilt indicator - mechanical		x
ERGONOMICS	STD	OPT
Enclosed Classic Cabin	х	
Powered tilt operator compartment for service	^	x
Manual tilt operator compartment for service	х	Â
Raised cabin height	^	х
Cabin automatic tip-up (for high stacking)		x
Operator presence system	х	^
Mechanical suspension seat	x	
Air suspension seat	^	x
Deluxe air suspension seat		x
Low backrest seat	х	~
High backrest seat	^	x
Armrest on left side	х	^
Cloth seat cover	x	
Vinyl seat cover	^	x
2-point high visibility seatbelt	х	^
Lateral seat sliding mechanism	^	x
Eatoral sout sharing moonanism		~

Dome interior light	x	
Front, top and rear wipers	x	
"I"-pattern front wiper	x	
Left side handrails, stairway and cabin door	x	
Right side handrails, stairway and cabin door	x	
Wire mesh installed on top of operator compartment		х
7" Integrated Performance Display	x	
Dual 7" Integrated Performance Displays*		х
Joystick hydraulic control integrated in control arm	x	
Steering wheel with spinner knob	х	
Directional control lever on steering column	x	
Directional control on joystick		х
Park brake - manual	x	
Park brake - automatic		х
Interior wide angle mirrors	x	
Heater with adjustable speed fan	x	
USB outlet inside armrest	х	
24-12 DC converter with 1 socket and 2 USB outlets	x	
24-12 DC converter with 2 sockets and 2 USB outlets		x
Air conditioning	x	
Reading light		х
Sun shades on top and rear	x	
Sun visors front window	~	х
Cloth trainer seat with 2-point seatbelt		x
Recirculation fan	x	~
Accessory mounting bar on cab front right pillar	^	x
Document holder on cab front right pillar	x	~
Heated top window	^	x
Radio preparation with 2 speakers and antenna		x
VISIBILITY	STD	
		UPI
Steel bars under armoured glass top window	X	
External wide angle mirrors mounted on rear of front fenders Exterior mirrors mounted to handrails	X	v
		X
Rear view camera system	v	X
LED work lights	X	
Four LED head lights mounted on front fenders	X	
Four forward work lights mounted on the cabin	X	
Two rearward work lights mounted on the cabin	X	
LED twistlock indicator lights	х	
LED stop / tail / brake lights	X	
Turn signals, hazard & marker lights (LED)	X	
2 additional LED spreader work lights pointed towards the twistlocks		X
APPEARANCE	STD	OPT
Hyster yellow paint base truck	х	
OPERATION	STD	OPT
Air horn 112 dBA	х	
Visible alarm – amber strobe light	х	
OPERATION (continued)	STD	OPT
*Standard on devide handling models		

\*Standard on double handling models.

# FEATURES AND OPTIONS

Audible alarm – reverse direction activated	х	
Blue LED spotlight - rear		Х
Seatbelt interlock for engine start and truck operation		х
Air conditioning shut-off with open door	x	
Automatic engine shutdown with timer		х
Delayed engine shutdown for turbo cooldown		х
Lockable battery disconnect switch		х
Battery jump start connector (NATO plug)		х
Truck start with key switch and start button	x	
Operator password (display) for truck start	x	
Fuses partially replaced by electric circuit breakers		х
Non-lockable fuel cap	x	
Lockable fuel cap		х
Hyster Tracker™ wireless asset management - access / verification		х
Hyster Tracker™ wireless asset management - monitoring	x	
Tire pressure monitoring system		х
Load weight indicator		х
Auto greasing system for spreader		х
Auto greasing system for base truck, outer mast with centralized greasing system for inner mast		x
Centralized greasing system for top end mast		х
24 volt electrical system	x	
Steer wheel lug nut protection	x	
Front and rear mud guards		х
SUPPLEMENTAL	STD	OPT
Literature package	x	
Operator's manual	x	
CE certification		х
Warranty: 12 months / 2,000 hours parts & labor manufacturer's warranty	x	

\*Standard on double handling models.



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