

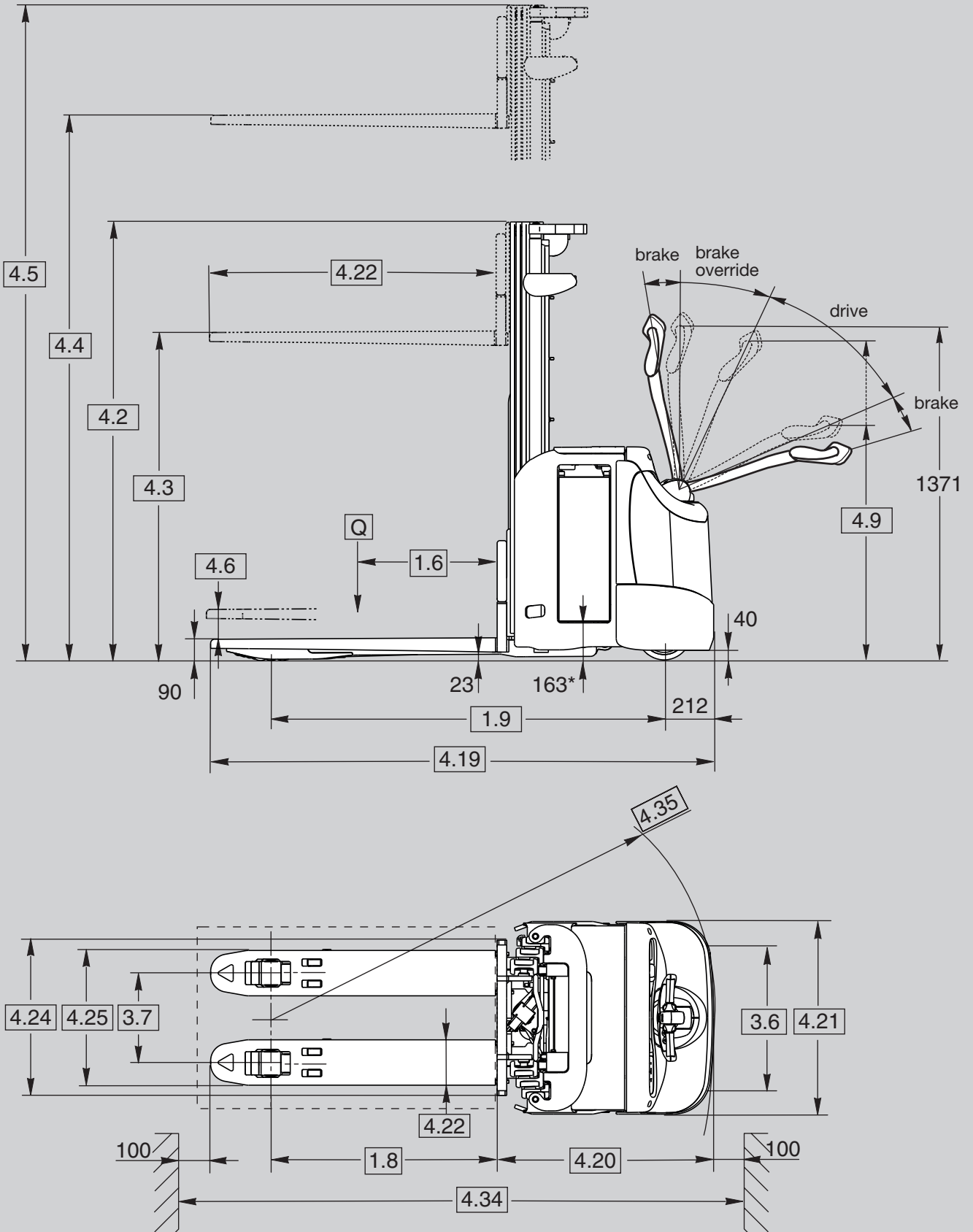
**CROWN**

# ES 4000 SERIES

## Specifications

Pedestrian Stacker with Initial Lift





\* battery roll out height, initial lift lowered

General Information	1.1	<b>Manufacturer</b>	Crown Equipment Corporation					
	1.2	<b>Model</b>			ESi 4000 – 1.2	ESi 4000 – 1.4	ESi 4000 – 1.6	
	1.3	<b>Power</b>			electric			
	1.4	<b>Operator Type</b>			pedestrian			
	1.5	<b>Load Capacity</b> <sup>5</sup>		Q	t	1.2	1.4	1.6
	1.6	<b>Load Centre</b>		c	mm	600		
	1.8	<b>Load Distance</b> <sup>6</sup>	TL-TF/TT, initial lift raised	x	mm	943 / 919	938 / 914	906 / 882
	1.9	<b>Wheel Base</b> <sup>7</sup>	initial lift raised	y	mm	1582		
	Weights	2.1	<b>Weight</b>			kg	see table 1	see table 2
2.2		<b>Axle Load</b>	w. load, front / rear		kg	see table 1	see table 2	see table 3
2.3		<b>Axle Load</b>	w.o. load, front / rear		kg	see table 1	see table 2	see table 3
Tyres	3.1	<b>Tyre Type</b>				Vulkollan		
	3.2	<b>Wheel Size</b> <sup>2</sup>	front		mm	Ø 230 x 70		
	3.3	<b>Wheel Size</b>	rear		mm	1x Ø 82 x 100	2x Ø 82 x 82	
	3.4	<b>Additional Wheels</b>	castor wheel		mm	Ø 140 x 54		
	3.5	<b>Wheels</b>	no. (x = driven) front / rear			1x + 1/2	1x + 1/4	
	3.6	<b>Track Width</b> <sup>3</sup>	front	b10	mm	542		
	3.7	<b>Track Width</b>	rear	b11	mm	374		
Dimensions	4.2	<b>Mast</b>	collapsed height	h1	mm	see table 1	see table 2	see table 3
	4.3	<b>Free Lift</b>		h2	mm	see table 1	see table 2	see table 3
	4.4	<b>Lift Height</b>		h3+h13	mm	see table 1	see table 2	see table 3
	4.5	<b>Mast</b>	extended height	h4	mm	see table 1	see table 2	see table 3
	4.6	<b>Initial Lift</b>		h5	mm	125		
	4.9	<b>Tiller Arm Height</b>	in drive position min./max.	h14	mm	800 / 1220		
	4.15	<b>Fork Height</b>	lowered	h13	mm	90		
	4.19	<b>Overall Length</b> <sup>1</sup>	TL-TF/TT, initial lift raised	l1	mm	2074 / 2092	2079 / 2097	2105 / 2129
	4.20	<b>Headlength</b> <sup>1</sup>	TL-TF/TT, initial lift raised	l2	mm	874 / 892	879 / 897	905 / 929
	4.21	<b>Overall Width</b>		b1	mm	800		
	4.22	<b>Fork Dimension</b>	standard	thxwxl	mm	60 x 186 x 1200	60 x 190 x 1200	
	4.24	<b>Fork Carriage Width</b>		b3	mm	650		
	4.25	<b>Width Across Forks</b>		b5	mm	560	565	
	4.32	<b>Ground Clearance</b>	centre wheel base	m2	mm	23		
	4.34	<b>Working Aisle Width</b>	800x1200 length, TL-TF/TT, initial lift raised	Ast	mm	2489 / 2503	2492 / 2506	2510 / 2525
4.35	<b>Turning Radius</b> <sup>7</sup>	initial lift raised	Wa	mm	1814			
Performance	5.1	<b>Travel Speed</b>	w./w.o. load		km/h	6 / 6	6 / 6	6 / 6
	5.2	<b>Lift Speed</b>	w./w.o. load		m/s	0.16 / 0.24	0.14 / 0.24	0.12 / 0.24
	5.3	<b>Lowering Speed</b>	w./w.o. load		m/s	0.36 / 0.25		
	5.8	<b>Max. Gradeability</b>	w./w.o. load 5 min. rating		%	10 / 16	9 / 16	8 / 16
	5.10	<b>Service Brake</b>				electric		
Motors	6.1	<b>Traction Motor</b>	rating at S2 60 min. / H-class		kW	3.0		
	6.2	<b>Lift Motor</b>	rating at S3 10 %		kW	3.0		
	6.3	<b>Max. Battery Box Size</b> <sup>8</sup>		lxwxh	mm	212 x 790 x 633		
	6.4	<b>Battery Voltage</b> <sup>4</sup>	nominal capacity 5h rating		V / Ah	24 / 230-270 (315-375)		
	6.5	<b>Battery Weight</b> <sup>4</sup>	min./max.		kg	201/252 (270/325)		
Misc.	8.1	<b>Type Controller</b>	drive			AC-transistor		
	8.4	<b>Sound Level</b>	acc. to EN 12053		dB(A)	≤ 70		

<sup>1</sup> subtract 22 mm for initial lift lowered

<sup>2</sup> Ø 250 x 75 mm with electronic steering

<sup>3</sup> subtract 9 mm with electronic steering

<sup>4</sup> with optional larger battery use values in brackets

<sup>5</sup> capacity on load arms = 2.0 t for electronic steering version

<sup>6</sup> add 64 mm for initial lift lowered

<sup>7</sup> add 42 mm for initial lift lowered

<sup>8</sup> contact Crown for battery details

Table 1 Mast Chart

1.2 Model					ESi 4000 - 1.2														
Mast Type					TL					TF					TT				
2.1	Weight <sup>1</sup>	less battery		kg	948	970	990	1014	1040	958	979	999	1022	1047	1063	1096	1120	1133	1154
2.2	Axle Load 250 Ah	w. load	front	kg	1178	1194	1208	1224	1243	1185	1200	1214	1230	1247	1241	1264	1281	1290	1304
			rear	kg	1182	1188	1194	1202	1209	1185	1191	1197	1204	1212	1234	1244	1251	1255	1262
2.3	Axle Load 250 Ah	w.o. load	front	kg	894	910	924	940	959	901	916	930	946	963	970	993	1010	1019	1034
			rear	kg	266	272	278	286	293	269	275	281	288	296	305	315	322	326	332
2.2	Axle Load 375 Ah	w. load	front	kg	1251	1267	1281	1297	1316	1258	1273	1287	1303	1320	1314	1337	1354	1365	1377
			rear	kg	1185	1191	1197	1205	1212	1188	1194	1200	1207	1215	1237	1247	1254	1258	1265
2.3	Axle Load 375 Ah	w.o. load	front	kg	956	971	985	1002	1020	962	977	991	1007	1025	1032	1055	1071	1080	1095
			rear	kg	280	287	293	300	308	284	290	296	303	310	319	329	337	341	347
4.2	Mast	collapsed height	h1	mm	1770	1980	2180	2420	2670	1770	1980	2180	2420	2670	1845	1980	2140	2220	2370
4.3	Free Lift <sup>2</sup>		h2	mm	180					1290	1500	1690	1940	2190	1360	1500	1660	1735	1870
4.4	Lift Height		h3+h13	mm	<b>2440</b>	<b>2860</b>	<b>3260</b>	<b>3740</b>	<b>4240</b>	<b>2540</b>	<b>2960</b>	<b>3360</b>	<b>3840</b>	<b>4340</b>	<b>4000</b>	<b>4440</b>	<b>4750</b>	<b>5000</b>	<b>5400</b>
4.5	Mast <sup>3</sup>	extended height	h4	mm	2920	3350	3750	4220	4720	3020	3450	3850	4320	4820	4480	4930	5240	5480	5880

Table 2 Mast Chart

1.2 Model					ESi 4000 - 1.4														
Mast Type					TL					TF					TT				
2.1	Weight <sup>1</sup>	less battery		kg	967	990	1012	1038	1066	977	1000	1021	1046	1073	1077	1110	1134	1147	1168
2.2	Axle Load 250 Ah	w. load	front	kg	1230	1246	1262	1280	1299	1237	1253	1268	1285	1304	1287	1310	1327	1335	1350
			rear	kg	1349	1356	1362	1370	1379	1352	1359	1365	1373	1381	1402	1412	1419	1424	1430
2.3	Axle Load 250 Ah	w.o. load	front	kg	903	919	935	953	972	910	926	941	958	977	976	999	1015	1024	1039
			rear	kg	276	283	289	297	306	279	286	292	300	308	313	323	331	335	341
2.2	Axle Load 375 Ah	w. load	front	kg	1305	1321	1337	1375	1375	1312	1328	1343	1360	1379	1362	1385	1402	1411	1425
			rear	kg	1350	1357	1363	1371	1379	1353	1360	1366	1374	1382	1403	1413	1420	1424	1431
2.3	Axle Load 375 Ah	w.o. load	front	kg	964	980	996	1014	1034	971	987	1002	1020	1039	1037	1060	1077	1085	1100
			rear	kg	291	298	304	312	320	294	301	307	314	322	328	338	345	350	356
4.2	Mast	collapsed height	h1	mm	1770	1980	2180	2420	2670	1770	1980	2180	2420	2670	1845	1980	2140	2220	2370
4.3	Free Lift <sup>2</sup>		h2	mm	180					1290	1500	1690	1940	2190	1360	1500	1660	1735	1870
4.4	Lift Height		h3+h13	mm	<b>2440</b>	<b>2860</b>	<b>3260</b>	<b>3740</b>	<b>4240</b>	<b>2540</b>	<b>2960</b>	<b>3360</b>	<b>3840</b>	<b>4340</b>	<b>4000</b>	<b>4440</b>	<b>4750</b>	<b>5000</b>	<b>5400</b>
4.5	Mast <sup>3</sup>	extended height	h4	mm	2920	3350	3750	4220	4720	3020	3450	3850	4320	4820	4480	4930	5240	5480	5880

Table 3 Mast Chart

1.2 Model					ESi 4000 - 1.6														
Mast Type					TL					TF					TT				
2.1	Weight <sup>1</sup>	less battery		kg	1026	1056	1086	1116	1151	1042	1072	1099	1132	1167	1191	1221	1251	1268	1296
2.2	Axle Load 250 Ah	w. load	front	kg	1289	1310	1330	1351	1376	1300	1320	1339	1362	1386	1372	1393	1413	1425	1444
			rear	kg	1549	1558	1568	1577	1587	1554	1564	1572	1582	1593	1631	1640	1650	1655	1664
2.3	Axle Load 250 Ah	w.o. load	front	kg	941	962	982	1003	1028	952	972	991	1014	1038	1048	1068	1089	1100	1119
			rear	kg	297	306	316	325	335	302	312	320	330	341	355	365	374	380	389
2.2	Axle Load 375 Ah	w. load	front	kg	1366	1387	1407	1428	1453	1377	1398	1416	1439	1464	1449	1470	1490	1502	1521
			rear	kg	1548	1557	1567	1576	1586	1553	1562	1571	1581	1591	1630	1639	1649	1654	1663
2.3	Axle Load 375 Ah	w.o. load	front	kg	1002	1023	1044	1065	1089	1013	1034	1053	1075	1100	1109	1130	1150	1162	1181
			rear	kg	312	321	330	339	350	317	326	334	345	355	370	379	389	394	403
4.2	Mast	collapsed height	h1	mm	1770	1980	2180	2420	2670	1770	1980	2180	2420	2670	1845	1980	2140	2220	2370
4.3	Free Lift <sup>2</sup>		h2	mm	180					1290	1500	1690	1940	2190	1360	1500	1660	1735	1870
4.4	Lift Height		h3+h13	mm	<b>2440</b>	<b>2860</b>	<b>3260</b>	<b>3740</b>	<b>4240</b>	<b>2540</b>	<b>2960</b>	<b>3360</b>	<b>3840</b>	<b>4340</b>	<b>4000</b>	<b>4440</b>	<b>4750</b>	<b>5000</b>	<b>5400</b>
4.5	Mast <sup>3</sup>	extended height	h4	mm	2920	3350	3750	4220	4720	3020	3450	3850	4320	4820	4480	4930	5240	5480	5880

<sup>1</sup> add 14 kg for electronic steering

<sup>2</sup> with 1200 mm high load backrest subtract 750 mm for TF and TT

<sup>3</sup> with 1200 mm high load backrest add 750 mm

axle load figures assume initial lift lowered and rated capacity on forks

all data apply to mechanical steering only

**Standard Equipment**

1. Load arms with initial lift
2. The X10® Control Handle places all truck functions at the operator's fingertips. Load arm lift/lower switches are located on left side
3. Proportional lifting/lowering provided by a low-noise hydraulic system
4. e-GEN® Braking System offers regenerative and frictionless electric braking. Mechanical braking applies only as parking brake
5. Crown Access 1 2 3® Comprehensive System Control
  - LCD display
  - Hour meter
  - Keyless start up with PIN code
  - Start up and run time diagnostics
  - Battery discharge indicator and lift interrupt
  - 3 selectable traction performance profiles
  - Onboard diagnostics with real time troubleshooting capabilities
6. Crown maintenance free 3-phase (AC) traction motor
7. CAN-Bus technology
8. Centre mounted tiller
9. Electric power disconnect push button
10. Ramp hold
11. Vulkollan drive tyre, castor wheel(s) and load wheels
12. Single load wheels (1.2 t and 1.4 t), tandem load wheels (1.6 t)
13. Heavy-duty chassis with 8 mm thick steel skirt
14. Easily removable steel cover
15. Hinged steel top battery cover for easy battery access
16. Plexiglas mast guard
17. Battery compartment for 230-270 Ah and 315-375 Ah
18. Battery roll out (right hand side, forks first direction)
19. Battery connector DIN 160A
20. Sealed electrical Deutsch connectors

**Optional Equipment**

1. Electronic Steering System with 3-phase (AC) motor
2. Load arm lift/lower switches on left and right side of X10 Control Handle
3. Pallet entry/exit roller system
4. Onboard charger
5. Battery connector SBE 160 red / SB 175 red / SB 175 grey
6. Rubber or Supertrac drive tyre
7. Tandem load wheels (1.2 t and 1.4 t)
8. Heavy-duty dual castor wheels
9. Fork length and spread options
10. Load backrest
11. Key switch or key pad
12. Freezer conditioning
13. InfoLink® ready
14. Work Assist accessory tube
15. Work Assist Accessories
  - Storage pockets
  - Scan gun holder
  - Medium and large clipboards
  - Beverage holder
16. Metal mast grill
17. Flashing beacon
18. Travel alarm
19. 12V clean power supply
20. 24V power supply
21. Special paint
22. Lithium-Ion Battery Ready

**Electric System / Battery**

24 volt electrical system with nominal battery capacities from 230 Ah to 375 Ah is managed by Crown's Access 1 2 3 Comprehensive System Control. Virtually maintenance-free Crown AC traction motor provides strong acceleration and control at any speed. Sensors monitor functional parameters including steering, load weight, height, drive mode and speed and adjust operational settings automatically to suit conditions.

**Power Unit**

The rugged power unit features a reinforced 8 mm thick skirt to protect drive unit and castor components. Removable steel covers all around ensure internal components are protected against impacts yet easily accessible for service. On the inside a Crown-built AC traction motor and a low-noise cast iron gearbox provide reliable power.

**Initial lift**

Initial lift offers higher under clearance for better handling and performance on ramps, grades and uneven surfaces. Initial lift offers the possibility of double pallet transport. Optional electronic steering allows transport of loads up to 2 tons on the load arms.

**Operator Area and Controls**

The ES 4000 Series incorporates numerous design features to improve operator comfort and productivity. The centre mounted X10 Control Handle is designed for operation of all functions with one hand and positions the operator in a safe distance to the power unit even with the tiller turned 90°.

Available electronic steering improves manoeuvrability and responsiveness, even with heavy loads.

Proportional lift and lowering allows easy and precise positioning of loads. The fast responsiveness and speeds of the lifting and lowering functions are designed to ensure high efficiency in all applications and at a low noise level.

For easy operation in tight areas a brake override function is incorporated which allows the ES 4000 to be driven safely and precisely at creep speed with the handle in a near vertical position. The control handle remains within the profile of the power unit at all times, even when performing 90° turn.

**Access 1 2 3® Comprehensive System Control**

Crown's Access 1 2 3 technology provides optimum performance and control by offering a communications interface for the operator and service engineer. The display includes a full featured on-board service tool allowing service engineers to actively view inputs and outputs during truck operation. No laptop or service terminal is required.

Up to 25 PIN codes can be assigned to individual operators and matched to one of the pre-programmed performance profiles if desired.

**e-GEN® Braking System**

The power of the high-torque AC traction motor is used to stop the truck and keep it static until a travel input is requested, even when operating on a gradient. This system eliminates adjustments and wear points for a lifetime of maintenance free use. An automatic parking brake activates if the truck is stopped or power is disconnected.

**Safety Regulations**

Conforms to European safety standards. Dimensions and performance data given may vary due to manufacturing tolerances. Performance is based on an average size vehicle and is affected by weight, condition of truck, how it is equipped and the conditions of the operating area. Crown products and specifications are subject to change without notice.

