

# Pedestrian stacker truck 1.2- 2.0 ton



## BT staxio

*P-series*

SPE120L

SPE140L

SPE160L

SPE200L



# Pedestrian stacker with elevating support arms

| Specifications   |   |   |                                | SPE120L             | SPE140L             | SPE160L             | SPE200L             |              |
|------------------|---|---|--------------------------------|---------------------|---------------------|---------------------|---------------------|--------------|
| Identification   | 1.1   | Manufacturer  |                                | Toyota              | Toyota              | Toyota              | Toyota              |              |
|                  | 1.2   | Model   |                                | SPE120L             | SPE140L             | SPE160L             | SPE200L             |              |
|                  | 1.3   | Drive   |                                | Electric            | Electric            | Electric            | Electric            |              |
|                  | 1.4   | Operator type   |                                | Stand on/pedestrian | Stand on/pedestrian | Stand on/pedestrian | Stand on/pedestrian |              |
|                  | 1.5   | Load capacity/rated load                                    | Q                              | kg                  | 1200                | 1400                | 1600                | 2000         |
|                  |   | Support arm capacity  | Q                              | kg                  | 2000                | 2000                | 2000                | 2000         |
|                  | 1.6   | Load center   | c                              | mm                  | 600                 | 600                 | 600                 | 600          |
|                  | 1.8   | Load distance, centre of support arm wheel to face of forks |                                |                     |                     |                     |                     |              |
|                  |   | raised support arms   | x                              | mm                  | 694                 | 661                 | 661                 | 644          |
|                  | lowered support arms                        | x   | mm                             | 725                 | 692                 | 692                 | 675                 |              |
| 1.9              | Wheelbase                                   |   |                                |                     |                     |                     |                     |              |
|                  | raised support arms                         | y   | mm                             | 1408                | 1408                | 1408                | 1408                |              |
|                  | lowered support arms                        | y   | mm                             | 1439                | 1439                | 1439                | 1439                |              |
| Weight           | 2.1   | Service weight incl. battery                                |                                | kg                  | 1349                | 1489                | 1489                | 1691         |
|                  | 2.2   | Axle load, with load, drive/castor/fork wheel               |                                | kg                  | 680/249/1620        | 820/143/1926        | 870/94/2125         | 680/384/2627 |
|                  | 2.3   | Axle load, without load, drive/castor/fork wheel            |                                | kg                  | 400/496/453         | 510/450/529         | 510/529/450         | 400/676/615  |
| Wheels           | 3.1   | Drive/castor/fork wheel                                     |                                |                     | Polyurethane        |                     |                     |              |
|                  | 3.2   | Wheel size, front   |                                | mm                  | Ø 230               | Ø 230               | Ø 230               | Ø 230        |
|                  | 3.3   | Wheel size, rear  |                                | mm                  | Ø 85                | Ø 85                | Ø 85                | Ø 85         |
|                  | 3.4   | Additional wheel size                                       |                                | mm                  | Ø 125               | Ø 125               | Ø 125               | Ø 125        |
|                  | 3.5   | Wheels, number front/rear (x = driven wheels)               |                                |                     | 1x+2/2 or 4         | 1x+2/2 or 4         | 1x+2/2 or 4         | 1x+2/2 or 4  |
|                  | 3.6   | Track width, front  | b <sub>10</sub>                | mm                  | 585                 | 585                 | 585                 | 585          |
|                  | 3.7   | Track width, rear   | b <sub>11</sub>                | mm                  | 390                 | 390                 | 390                 | 390          |
| Dimensions       | 4.2   | Height, mast lowered  | h <sub>1</sub>                 | mm                  | 2020 *)             | 1955 *)             | 1955 *)             | 1955 *)      |
|                  | 4.3   | Free lift   | h <sub>2</sub>                 | mm                  | 1556 *)             | 1478 *)             | 1478 *)             | 1378 *)      |
|                  | 4.4   | Lift  | h <sub>3</sub>                 | mm                  | 4060 *)             | 4060 *)             | 4060 *)             | 3960 *)      |
|                  |   | Lift height   | h <sub>23</sub>                | mm                  | 4150 *)             | 4150 *)             | 4150 *)             | 4050 *)      |
|                  | 4.5   | Height, mast extended                                       | h <sub>4</sub>                 | mm                  | 4657 *)             | 4668 *)             | 4668 *)             | 4668 *)      |
|                  | 4.6   | Initial Lift  | h <sub>5</sub>                 | mm                  | 120                 | 120                 | 120                 | 120          |
|                  | 4.8   | Stand height  | h <sub>7</sub>                 | mm                  | 190                 | 190                 | 190                 | 190          |
|                  | 4.9   | Height of tiller in drive position, min./max.               |                                |                     |                     |                     |                     |              |
|                  |   | highest setting   | h <sub>14</sub>                | mm                  | 1201/1413           | 1201/1413           | 1201/1413           | 1201/1413    |
|                  |   | lowest setting  | h <sub>14</sub>                | mm                  | 1101/1313           | 1101/1313           | 1101/1313           | 1101/1313    |
|                  | 4.15  | Height, fork lowered  | h <sub>13</sub>                | mm                  | 90                  | 90                  | 90                  | 90           |
|                  | 4.19  | Overall length  |                                |                     |                     |                     |                     |              |
|                  |   | platform up   | l <sub>1</sub>                 | mm                  | 2085                | 2106                | 2106                | 2129         |
|                  |   | platform down   | l <sub>1</sub>                 | mm                  | 2532                | 2565                | 2565                | 2577         |
|                  | 4.20  | Length to face of forks                                     |                                |                     |                     |                     |                     |              |
|                  |   | platform up   | l <sub>2</sub>                 | mm                  | 935                 | 956                 | 956                 | 979          |
|                  |   | platform down   | l <sub>2</sub>                 | mm                  | 1382                | 1415                | 1415                | 1427         |
|                  | 4.21  | Overall width   | b <sub>1</sub> /b <sub>2</sub> | mm                  | 790/—               | 790/—               | 790/—               | 850/—        |
|                  | 4.22  | Fork dimensions   | s/e/l                          | mm                  | 70/180/1150         | 70/180/1150         | 70/180/1150         | 70/185/1150  |
|                  | 4.25  | Width over forks  | b <sub>5</sub>                 | mm                  | 570                 | 570                 | 570                 | 575          |
| 4.32             | Ground clearance, center of wheelbase       | m <sub>2</sub>  | mm                             | 19,5                | 19,5                | 19,5                | 19,5                |              |
| 4.33             | Aisle width for pallets 1000x1200 crossways |   |                                |                     |                     |                     |                     |              |
|                  | platform up                                 | A <sub>st</sub>   | mm                             | 2619                | 2639                | 2639                | 2650                |              |
|                  | platform down                               | A <sub>st</sub>   | mm                             | 3068                | 3088                | 3088                | 3099                |              |
| 4.34             | Aisle width for pallets 800x1200 lengthways |   |                                |                     |                     |                     |                     |              |
|                  | platform up                                 | A <sub>st</sub>   | mm                             | 2510                | 2536                | 2536                | 2550                |              |
|                  | platform down                               | A <sub>st</sub>   | mm                             | 2959                | 2985                | 2985                | 2999                |              |
| 4.35             | Turning radius                              |   |                                |                     |                     |                     |                     |              |
|                  | platform up                                 | W <sub>a</sub>  | mm                             | 1665                | 1665                | 1665                | 1665                |              |
|                  | platform down                               | W <sub>a</sub>  | mm                             | 2114                | 2114                | 2114                | 2114                |              |
| Performance data | 5.1   | Travel speed, with/without load                             |                                |                     |                     |                     |                     |              |
|                  |   | 6 km/h version  | km/h                           | 6,0/6,0             | 6,0/6,0             | 6,0/6,0             | 6,0/6,0             |              |
|                  |   | 8 km/h version  | km/h                           | 7,0/8,0             | 7,0/8,0             | 7,0/8,0             | —                   |              |
|                  |   | 10 km/h version   | km/h                           | —                   | 9,0/10,0            | 9,0/10,0            | —                   |              |
|                  | 5.2   | Lift speed, with/without load                               |                                | m/s                 | 0,20/0,36           | 0,17/0,33           | 0,15/0,31           | 0,13/0,24    |
|                  | 5.3   | Lowering speed, with/without load                           |                                | m/s                 | 0,45/0,45           | 0,45/0,45           | 0,45/0,45           | 0,38/0,45    |
| 5.8              | Max. gradeability, with/without load        |   | %                              | 8/12                | 8/12                | 8/12                | 8/12                |              |
| 5.9              | Acceleration time (over 10 m)               |   | s                              | 5,2                 | 5,3                 | 5,5                 | 6,6                 |              |
| 5.10             | Service brake                               |   |                                | Electromagnetic     | Electromagnetic     | Electromagnetic     | Electromagnetic     |              |
| Electric motor   | 6.1   | Drive motor rating (S2 60min)                               |                                |                     |                     |                     |                     |              |
|                  |   | 6 km/h version  | kW                             | 1,8                 | 1,8                 | 1,8                 | 1,8                 |              |
|                  |   | 8 km/h version  | kW                             | 1,8                 | 1,8                 | 1,8                 | —                   |              |
|                  |   | 10 km/h version   | kW                             | —                   | 2,5                 | 2,5                 | —                   |              |
|                  | 6.2   | Lift motor rating (S3 15%)                                  |                                | kW                  | 3                   | 3                   | 3                   |              |
|                  | 6.4   | Battery voltage, nominal capacity K <sub>s</sub>            |                                | V/Ah                | 24/300              | 24/300              | 24/300              | 24/300       |
| 6.5              | Battery weight                              |   | kg                             | 195-270             | 195-270             | 195-270             | 195-270             |              |
| 6.6              | Energy consumption acc to VDI cycle         |   | kWh/h                          | 1,04                | 1,06                | 1,07                | 1,06                |              |
| Others           | 8.1   | Type of drive control                                       |                                |                     | Variable AC         | Variable AC         | Variable AC         |              |
|                  | 8.4   | Sound level at the driver's ear according to EN 12 053      |                                | dB (A)              | 66                  | 66                  | 66                  |              |

1) Measured according to company standard.

\*) Further alternatives are available and will produce other values.

Data is based on standard configurations: Small battery compartment, h23 = 4150 mm (SPE120/140/160) and 4050 mm (SPE200) Triplex HiLo mast

All data are based on table configuration. Other configurations may give other values.

Truck performance and dimensions are nominal and subject to tolerances.

# Battery dependent dimensions

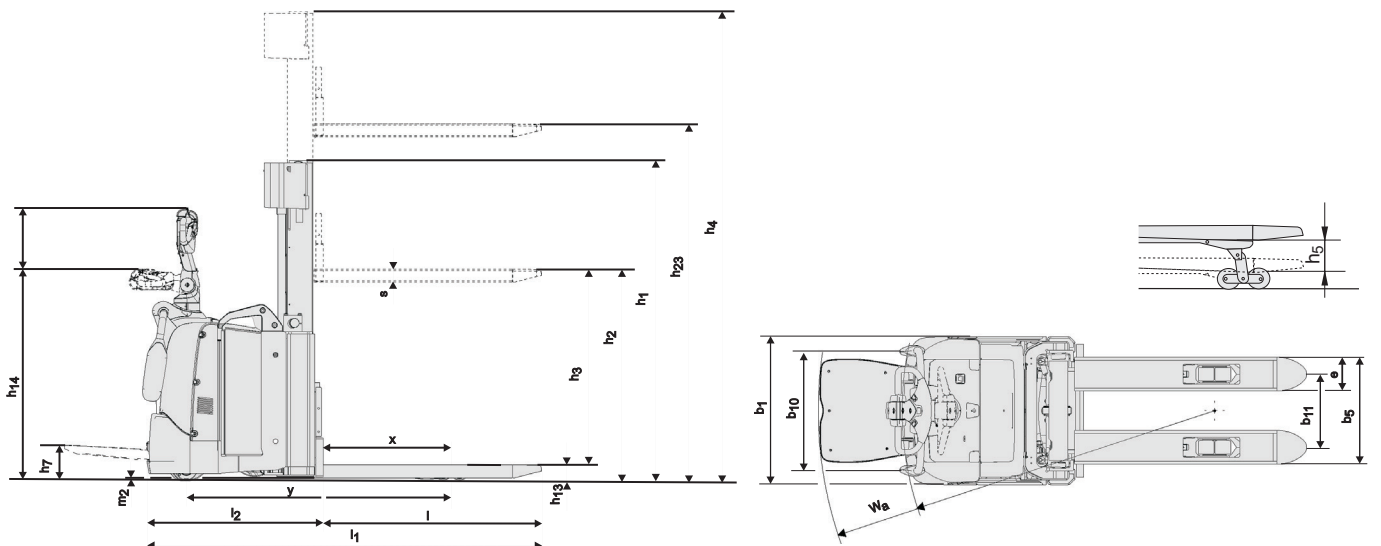
| Dimensions |   | Battery  |      | SPE120L  |         |          |         | SPE140L  |         |          |         | SPE160L  |         |          |         | SPE200L  |         |          |         |
|------------|---|----------|------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
|            |   |          |      | Lift out |         | Sideways |         | Lift out |         | Sideways |         | Lift out |         | Sideways |         | Lift out |         | Sideways |         |
|            |   |          |      | S        | L*      | S        | L*      | S        | L*      | S        | L*      | S        | L*      | S        | L*      | S        | L*      | S        | L*      |
| 1.9        | Wheelbase                                   |          |      |          |         |          |         |          |         |          |         |          |         |          |         |          |         |          |         |
|            | raised support arms                         | y        | mm   | 1408     | 1505    | 1408     | 1505    | 1408     | 1505    | 1408     | 1505    | 1408     | 1505    | 1408     | 1505    | 1408     | 1505    | 1408     | 1505    |
|            | lowered support arms                        | y        | mm   | 1439     | 1536    | 1436     | 1536    | 1439     | 1536    | 1439     | 1536    | 1439     | 1536    | 1439     | 1536    | 1439     | 1536    | 1439     | 1536    |
| 4.19       | Overall length                              |          |      |          |         |          |         |          |         |          |         |          |         |          |         |          |         |          |         |
|            | platform up                                 | $l_1$    | mm   | 2085     | 2181    | 2085     | 2181    | 2106     | 2203    | 2106     | 2203    | 2106     | 2203    | 2106     | 2203    | 2129     | 2226    | 2129     | 2226    |
|            | platform down                               | $l_1$    | mm   | 2532     | 2631    | 2532     | 2631    | 2565     | 2665    | 2565     | 2665    | 2565     | 2665    | 2565     | 2665    | 2577     | 2674    | 2577     | 2674    |
| 4.20       | Length to face of forks                     |          |      |          |         |          |         |          |         |          |         |          |         |          |         |          |         |          |         |
|            | platform up                                 | $l_2$    | mm   | 935      | 1031    | 935      | 1031    | 956      | 1053    | 956      | 1053    | 956      | 1053    | 956      | 1053    | 979      | 1076    | 979      | 1076    |
|            | platform down                               | $l_2$    | mm   | 1382     | 1481    | 1382     | 1481    | 1415     | 1515    | 1415     | 1515    | 1415     | 1515    | 1415     | 1515    | 1427     | 1524    | 1427     | 1524    |
| 4.33       | Aisle width for pallets 1000x1200 crossways |          |      |          |         |          |         |          |         |          |         |          |         |          |         |          |         |          |         |
|            | platform up                                 | $A_{st}$ | mm   | 2619     | 2715    | 2619     | 2715    | 2639     | 2735    | 2639     | 2735    | 2639     | 2735    | 2639     | 2735    | 2650     | 2746    | 2650     | 2746    |
|            | platform down                               | $A_{st}$ | mm   | 3068     | 3165    | 3068     | 3165    | 3088     | 3185    | 3088     | 3185    | 3088     | 3185    | 3088     | 3185    | 3099     | 3196    | 3099     | 3196    |
| 4.34       | Aisle width for pallets 800x1200 lengthways |          |      |          |         |          |         |          |         |          |         |          |         |          |         |          |         |          |         |
|            | platform up                                 | $A_{st}$ | mm   | 2510     | 2606    | 2510     | 2606    | 2536     | 2632    | 2536     | 2632    | 2536     | 2632    | 2536     | 2632    | 2550     | 2646    | 2550     | 2646    |
|            | platform down                               | $A_{st}$ | mm   | 2959     | 3056    | 2959     | 3056    | 2985     | 3082    | 2985     | 3082    | 2985     | 3082    | 2985     | 3082    | 2999     | 3096    | 2999     | 3096    |
| 4.35       | Turning radius                              |          |      |          |         |          |         |          |         |          |         |          |         |          |         |          |         |          |         |
|            | platform up                                 | $W_a$    | mm   | 1665     | 1761    | 1665     | 1761    | 1665     | 1761    | 1665     | 1761    | 1665     | 1761    | 1665     | 1761    | 1665     | 1761    | 1665     | 1761    |
|            | platform down                               | $W_a$    | mm   | 2114     | 2211    | 2114     | 2211    | 2114     | 2211    | 2114     | 2211    | 2114     | 2211    | 2114     | 2211    | 2114     | 2211    | 2114     | 2211    |
| 6.4        | Battery voltage, nominal capacity $K_s$     |          | V/Ah | 24/300   | 24/500  | 24/300   | 24/500  | 24/300   | 24/500  | 24/300   | 24/500  | 24/300   | 24/500  | 24/300   | 24/500  | 24/300   | 24/500  | 24/300   | 24/500  |
| 6.5        | Battery weight, min.—max.                   |          | kg   | 195-310  | 345-405 | 195-300  | 345-405 | 195-310  | 345-405 | 195-310  | 345-405 | 195-310  | 345-405 | 195-310  | 345-405 | 195-310  | 345-405 | 195-310  | 345-405 |

\* DIN battery will give same truck dimensions as for the large battery

# Mast dimensions

| Mast    |          |                                   | Duplex Tele Panoramic View |      |      |      |      | Duplex HiLo |      |      |      |      | Triplex HiLo |      |      |      |      |      |      |      |      |      |      |
|---------|----------|-----------------------------------|----------------------------|------|------|------|------|-------------|------|------|------|------|--------------|------|------|------|------|------|------|------|------|------|------|
| SPE120L | $h_{23}$ | Lift height ( $h_{13}+h_3$ )      | mm                         | 2350 | 2800 | 3300 | 3700 | 4150        | 1950 | 2350 | 2500 | 2800 | 3300         | 3700 | 4150 | 3300 | 3700 | 3950 | 4150 | 4500 | 4800 | —    | —    |
|         | $h_3$    | Lift                              | mm                         | 2260 | 2710 | 3210 | 3610 | 4060        | 1860 | 2260 | 2410 | 2710 | 3210         | 3610 | 4060 | 3210 | 3610 | 3860 | 4060 | 4410 | 4710 | —    | —    |
|         | $h_1$    | Height, mast lowered              | mm                         | 1718 | 1943 | 2193 | 2393 | 2618        | 1518 | 1718 | 1793 | 1943 | 2193         | 2393 | 2618 | 1737 | 1870 | 1953 | 2020 | 2137 | 2237 | —    | —    |
|         | $h_2$    | Free lift, ground to top of forks | mm                         | 172  | 172  | 172  | 172  | 172         | 1082 | 1282 | 1356 | 1506 | 1756         | 1956 | 2182 | 1274 | 1406 | 1490 | 1556 | 1674 | 1774 | —    | —    |
|         | $h_4$    | Height, mast extended             | mm                         | 2827 | 3277 | 3777 | 4177 | 4627        | 2468 | 2868 | 3018 | 3318 | 3818         | 4218 | 4668 | 3808 | 4207 | 4456 | 4657 | 5008 | 5308 | —    | —    |
| SPE140L | $h_{23}$ | Lift height ( $h_{13}+h_3$ )      | mm                         | 2350 | 2800 | 3300 | 3700 | 4150        | —    | 2350 | 2500 | 2800 | 3300         | 3700 | 4150 | 3300 | 3700 | 3950 | 4150 | 4500 | 4800 | 5400 | —    |
|         | $h_3$    | Lift                              | mm                         | 2260 | 2710 | 3210 | 3610 | 4060        | —    | 2260 | 2410 | 2710 | 3210         | 3610 | 4060 | 3210 | 3610 | 3860 | 4060 | 4410 | 4710 | 5310 | —    |
|         | $h_1$    | Height, mast lowered              | mm                         | 1744 | 1969 | 2219 | 2419 | 2644        | —    | 1743 | 1818 | 1968 | 2218         | 2418 | 2643 | 1671 | 1805 | 1888 | 1955 | 2071 | 2171 | 2371 | —    |
|         | $h_2$    | Free lift, ground to top of forks | mm                         | —    | —    | —    | —    | —           | —    | 1256 | 1332 | 1482 | 1732         | 1932 | 2156 | 1194 | 1328 | 1410 | 1478 | 1594 | 1694 | 1894 | —    |
|         | $h_4$    | Height, mast extended             | mm                         | 2892 | 3342 | 3842 | 4242 | 4692        | —    | 2891 | 3041 | 3341 | 3841         | 4241 | 4691 | 3816 | 4218 | 4467 | 4668 | 5016 | 5316 | 5916 | —    |
| SPE160L | $h_{23}$ | Lift height ( $h_{13}+h_3$ )      | mm                         | 2350 | 2800 | 3300 | 3700 | 4150        | 1950 | 2350 | 2500 | 2800 | 3300         | 3700 | 4150 | 3300 | 3700 | 3950 | 4150 | 4500 | 4800 | 5400 | 6000 |
|         | $h_3$    | Lift                              | mm                         | 2260 | 2710 | 3210 | 3610 | 4060        | 1860 | 2260 | 2410 | 2710 | 3210         | 3610 | 4060 | 3210 | 3610 | 3860 | 4060 | 4410 | 4710 | 5310 | 5910 |
|         | $h_1$    | Height, mast lowered              | mm                         | 1744 | 1969 | 2219 | 2419 | 2644        | 1543 | 1743 | 1818 | 1968 | 2218         | 2418 | 2643 | 1671 | 1805 | 1888 | 1955 | 2071 | 2171 | 2371 | 2571 |
|         | $h_2$    | Free lift, ground to top of forks | mm                         | —    | —    | —    | —    | —           | 1056 | 1256 | 1332 | 1482 | 1732         | 1932 | 2156 | 1194 | 1328 | 1410 | 1478 | 1594 | 1694 | 1894 | 2096 |
|         | $h_4$    | Height, mast extended             | mm                         | 2892 | 3342 | 3842 | 4242 | 4692        | 2491 | 2891 | 3041 | 3341 | 3841         | 4241 | 4691 | 3816 | 4218 | 4467 | 4668 | 5016 | 5316 | 5916 | 6520 |

| Mast    |          |                                   | Duplex Tele Panoramic View |      |      |      |      | Duplex HiLo |      |      |      |      | Triplex HiLo |      |      |      |      |      |      |   |   |   |   |
|---------|----------|-----------------------------------|----------------------------|------|------|------|------|-------------|------|------|------|------|--------------|------|------|------|------|------|------|---|---|---|---|
| SPE200L | $h_{23}$ | Lift height ( $h_{13}+h_3$ )      | mm                         | 2150 | 2600 | 3100 | 3500 | 3950        | 2150 | 2300 | 2600 | 3100 | 3500         | 3950 | 3200 | 3600 | 3850 | 4050 | 4400 | — | — | — | — |
|         | $h_3$    | Lift                              | mm                         | 2060 | 2510 | 3010 | 3410 | 3860        | 2060 | 2210 | 2510 | 3010 | 3410         | 3860 | 3110 | 3510 | 3760 | 3960 | 4310 | — | — | — | — |
|         | $h_1$    | Height, mast lowered              | mm                         | 1744 | 1969 | 2219 | 2419 | 2644        | 1744 | 1819 | 1969 | 2219 | 2419         | 2644 | 1671 | 1805 | 1888 | 1955 | 2071 | — | — | — | — |
|         | $h_2$    | Free lift, ground to top of forks | mm                         | —    | —    | —    | —    | —           | 1156 | 1232 | 1382 | 1632 | 1832         | 2056 | 1094 | 1228 | 1310 | 1378 | 1494 | — | — | — | — |
|         | $h_4$    | Height, mast extended             | mm                         | 2792 | 3242 | 3742 | 4142 | 4592        | 2792 | 2942 | 3242 | 3742 | 4142         | 4592 | 3816 | 4218 | 4467 | 4668 | 5016 | — | — | — | — |



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## Truck features:

- BT Powertrak traction system
- Optimized Truck Performance
- Fingertip controls
- Electronic braking system
- Electronic speed control
- Operator safety
- Storage compartments
- Automatic switch-off
- Programmable performance
- Easy access for maintenance
- Sensilift
- Toyota I\_site: truck fleet management system (option)
- Hydraulic oil for low temperatures (option)
- Li-ion battery (option)

