

# Reach truck 1.4 - 2.5 ton

## BT reflex

*R & E-series*

RRE140/E

RRE160/E

RRE180/E

RRE200/E

RRE250/E



# Reach truck

| Truck specifications |                            |   |                                  |                | RRE140,E/C   | RRE160,E/C   | RRE180,E/C   | RRE200,E/C   | RRE250,E/C   |             |
|----------------------|----------------------------|---|----------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|-------------|
| Identification       | 1.1                        | Manufacturer  |                                  |                | BT           | BT           | BT           | BT           | BT           |             |
|                      | 1.2                        | Model   |                                  |                | RRE140,E/C   | RRE160,E/C   | RRE180,E/C   | RRE200,E/C   | RRE250,E/C   |             |
|                      | 1.3                        | Drive   |                                  |                | Electric     | Electric     | Electric     | Electric     | Electric     |             |
|                      | 1.4                        | Operator type   |                                  |                | Seated       | Seated       | Seated       | Seated       | Seated       |             |
|                      | 1.5                        | Load capacity/rated load  | Q                                | kg             | 1400         | 1600         | 1800         | 2000         | 2500         |             |
|                      | 1.6                        | Load centre   | c                                | mm             | 600          | 600          | 600          | 600          | 600          |             |
|                      | 1.8                        | Load distance, centre of support arm wheel to face of forks     | x                                | mm             | 305*         | 347*         | 406*         | 446*         | 335*         |             |
|                      | 1.9                        | Wheelbase   | y                                | mm             | 1295         | 1335         | 1475         | 1515         | 1575         |             |
|                      | Weight                     | 2.1   | Service weight including battery |                | kg           | 3369         | 3370         | 3863         | 4046         | 4805        |
| 2.3                  |                            | Axle load, mast retracted without load, drive/support arm wheel |                                  | kg             | 2040/1329    | 2073/1297    | 2424/1439    | 2546/1499    | 2858/1947    |             |
| 2.4                  |                            | Axle load, mast extended with load, drive/support arm wheel     |                                  | kg             | 672/4097     | 586/4385     | 845/4819     | 863/5183     | 589/6446     |             |
| 2.5                  |                            | Axle load, mast retracted with load, drive/support arm wheel    |                                  | kg             | 1701/3068    | 1745/3225    | 2165/3498    | 2318/3727    | 2454/4851    |             |
| Wheels               |                            | 3.1   | Drive/support arm wheel          |                |              | Vulkollan    | Vulkollan    | Vulkollan    | Vulkollan    | Vulkollan   |
|                      | 3.2                        | Wheel size, front   |                                  |                | 350          | 350          | 400          | 400          | 400          |             |
|                      | 3.3                        | Wheel size, rear  |                                  |                | 300          | 300*         | 350          | 350          | 350          |             |
|                      | 3.5                        | Wheels, number front/rear (x=driven wheels)                     |                                  |                | 1x/2         | 1x/2         | 1x/2         | 1x/2         | 1x/2         |             |
|                      | 3.7                        | Track width, rear   | b <sub>11</sub>                  | mm             | 1134         | 1134         | 1134         | 1134         | 1134         |             |
|                      | Dimensions                 | 4.1   | Tilt of fork, forward/backward   | $\alpha/\beta$ | deg          | 4°/-2°**     | 4°/-2°**     | 4°/-2°**     | 4°/-2°**     | 4°/-2°**    |
|                      |                            | 4.2   | Height, mast lowered             | h <sub>1</sub> | mm           | 2732*        | 2732*        | 2732*        | 2732*        | 2771*       |
| 4.3                  |                            | Free lift   | h <sub>2</sub>                   | mm             | 1691*        | 1691*        | 1691         | 1691         | 1791*        |             |
| 4.4                  |                            | Lift  | h <sub>3</sub>                   | mm             | 6260*        | 6260*        | 6260*        | 6260*        | 6255*        |             |
|                      |                            | Lift height   | h <sub>23</sub>                  | mm             | 6300*        | 6300*        | 6300*        | 6300*        | 6300*        |             |
| 4.5                  |                            | Height, mast extended   | h <sub>4</sub>                   | mm             | 6940*        | 6940*        | 6940*        | 6940*        | 6881*        |             |
| 4.7                  |                            | Height of overhead guard (cab)                                  | h <sub>6</sub>                   | mm             | 2198         | 2198         | 2260         | 2260         | 2260         |             |
| 4.8                  |                            | Seat height   | h <sub>7</sub>                   | mm             | 1131         | 1131         | 1193         | 1193         | 1193         |             |
| 4.10                 |                            | Height of support arms  | h <sub>8</sub>                   | mm             | 268          | 268          | 330          | 330          | 330          |             |
| 4.15                 |                            | Height of lowered forks   | h <sub>13</sub>                  | mm             | 40           | 40           | 40           | 40           | 45           |             |
| 4.19                 |                            | Overall length  | l <sub>1</sub>                   | mm             | 2362         | 2365         | 2446         | 2446         | 2607         |             |
| 4.20                 |                            | Length to face of forks   | l <sub>2</sub>                   | mm             | 1252         | 1250         | 1331         | 1331         | 1502         |             |
| 4.21                 |                            | Overall width   | b <sub>1</sub>                   | mm             | 1270         | 1270         | 1270         | 1270         | 1270         |             |
| 4.22                 |                            | Fork dimensions   | s/e/l                            | mm             | 40/100/1150* | 40/100/1150* | 40/120/1150* | 40/120/1150* | 45/125/1150* |             |
| 4.23                 |                            | Fork carriage ISO 2328, class/type A, B                         |                                  |                | II A         | II A         | II A         | II A         | II A         |             |
| 4.25                 |                            | Width over forks  | b <sub>5</sub>                   | mm             | 250-738      | 250-738      | 250-738      | 250-738      | 250-738      |             |
| 4.26                 |                            | Distance between support arms                                   | b <sub>4</sub>                   | mm             | 900*         | 900*         | 900*         | 900*         | 900*         |             |
| 4.28                 |                            | Reach distance  | l <sub>4</sub>                   | mm             | 434*         | 474*         | 614*         | 670*         | 571*         |             |
| 4.31                 |                            | Ground clearance, with load, below mast                         | m <sub>1</sub>                   | mm             | 68           | 68           | 68           | 68           | 88           |             |
| 4.32                 |                            | Ground clearance, centre of wheelbase <sup>1)</sup>             | m <sub>2</sub>                   | mm             | 74           | 74           | 77           | 77           | 77           |             |
| 4.33                 |                            | Aisle width for pallets 1000 x 1200 crossways                   | A <sub>st</sub>                  | mm             | 2675         | 2684         | 2781         | 2794         | 2933         |             |
| 4.34                 |                            | Aisle width for pallets 800 x 1200 lengthways                   | A <sub>st</sub>                  | mm             | 2737         | 2739         | 2826         | 2831         | 2990         |             |
| 4.35                 |                            | Turning radius  | W <sub>a</sub>                   | mm             | 1557         | 1597         | 1737         | 1777         | 1837         |             |
| 4.37                 | Length across support arms | l <sub>7</sub>  | mm                               | 1728           | 1768         | 1933         | 1973         | 2033         |              |             |
| Performance data     | 5.1                        | Travel speed, with/without load                                 |                                  | km/h           | 11/11        | 10/11        | 11/11        | 11/11        | 11/11        |             |
|                      |                            | Travel speed, High speed version, with/without load             |                                  | km/h           | 14/14        | 14/14        | 14/14        | 14/14        | 14/14        |             |
|                      | 5.2                        | Lift speed, with/without load                                   |                                  | m/s            | 0,35/0,70    | 0,35/0,70    | 0,35/0,70    | 0,35/0,70    | 0,35/0,70    |             |
|                      | 5.3                        | Lowering speed, with/without load                               |                                  | m/s            | 0,55/0,55    | 0,55/0,55    | 0,55/0,55    | 0,55/0,55    | 0,55/0,55    |             |
|                      | 5.4                        | Reach speed, with/without load                                  |                                  | m/s            | 0,25/0,25    | 0,25/0,25    | 0,25/0,25    | 0,25/0,25    | 0,25/0,25    |             |
|                      | 5.8                        | Max. gradeability, with/without load <sup>2)</sup>              |                                  | %              | 10/15        | 10/15        | 10/15        | 10/15        | 7/12         |             |
| 5.10                 | Service brake              |   |                                  | Electric       | Electric     | Electric     | Electric     | Electric     |              |             |
| Electric motor       | 6.1                        | Drive motor rating S2 60 min                                    |                                  | kW             | 7,5          | 7,5          | 9,0          | 9,0          | 9,0          |             |
|                      | 6.2                        | Lift motor rating S3 15%  |                                  | kW             | 11           | 11           | 15           | 15           | 15           |             |
|                      | 6.4                        | Battery voltage, nominal capacity K <sub>5</sub>                |                                  | V/Ah           | 48/465*      | 48/465*      | 48/620*      | 48/620*      | 48/775*      |             |
|                      | 6.5                        | Battery weight  |                                  | kg             | 725*         | 725*         | 940*         | 940*         | 1150*        |             |
|                      | 6.6                        | Energy consumption acc to VDI cycle                             |                                  | kWh/h          | —            | 3,71         | —            | 4,88         | 5,83         |             |
|                      | 6.7                        | Turnover output   |                                  | t/h            | —            | 58           | —            | 72           | 86           |             |
|                      | 6.8                        | Energy consumption at turnover output                           |                                  | kWh/h          | —            | 2,8          | —            | 3,4          | 4,2          |             |
|                      | Other                      | 8.1   | Type of drive control            |                |              | Variable AC  | Variable AC  | 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           | 66           | 66           |             |

1) 15 mm under studs

2) Measured according to company standard

\*) Other alternatives are available

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

Truck performance and dimensions are nominal and subject to tolerances.

BT products and specifications are subject to change without notice.

# Battery compartment

| Dimensions  |  |          |      | RRE140,E/C        |              |               | RRE160,E/C        |                   |                | RRE180,E/C        |               | RRE200,E/C        |                   |                 | RRE250,E/C        |                 |
|---|--|----------|------|-------------------|--------------|---------------|-------------------|-------------------|----------------|-------------------|---------------|-------------------|-------------------|-----------------|-------------------|-----------------|
| Reflex  | Depth  |          | mm   | 275 <sup>1)</sup> | 347          | 419           | 275 <sup>1)</sup> | 347 <sup>2)</sup> | 419            | 347 <sup>2)</sup> | 419           | 347 <sup>2)</sup> | 419 <sup>3)</sup> | 491             | 419 <sup>3)</sup> | 491             |
|   | 4.20 Length to face of forks ***                     | $l_2$    | mm   | 1252              | 1324         | 1396          | 1250              | 1322              | 1394           | 1331              | 1403          | 1331              | 1403              | 1475            | 1502              | 1574            |
|   | 4.33 Aisle width for pallets 1000x1200 crossways *** | $A_{st}$ | mm   | 2675              | 2731         | 2848          | 2684              | 2738              | 2795           | 2781              | 2833          | 2794              | 2844              | 2897            | 2933              | 2987            |
|   | 4.34 Aisle width for pallets 800x1200 lengthways *** | $A_{st}$ | mm   | 2737              | 2803         | 2870          | 2739              | 2805              | 2871           | 2826              | 2891          | 2831              | 2895              | 2960            | 2990              | 3056            |
|   | 6.4 Battery voltage, nominal capacity $K_5$          |          | V/Ah | 48/465            | 48/620       | 48/775        | 48/465            | 48/620            | 48/775         | 48/620            | 48/775        | 48/620            | 48/775            | 48/930          | 48/775            | 48/930          |
|   | 6.5 Battery weight, min.—max.                        |          | kg   | 685-<br>825       | 875-<br>1030 | 1055-<br>1235 | 685-<br>825       | 875-<br>1030      | 1055-<br>1235* | 875-<br>1030      | 1055-<br>1235 | 875-<br>1030      | 1055-<br>1235     | 1240-<br>1440** | 1055-<br>1235     | 1240-<br>1440** |
| 1.8 Load distance, centre of support arm wheel to face of forks | x  | mm       | 305  | 233               | 161          | 347           | 275               | 203               | 406            | 334               | 446           | 374               | 302               | 335             | 263               |                 |

\* = Lh 10000 and 10500 mm: 1060-1235 kg

1) Lh max 7500 mm

Figures above are for Lh 6300 mm and shortest standard battery fitting

\*\* = Lh 12000 and 12500 mm: 1250-1440 kg

2) Lh max 9500 mm

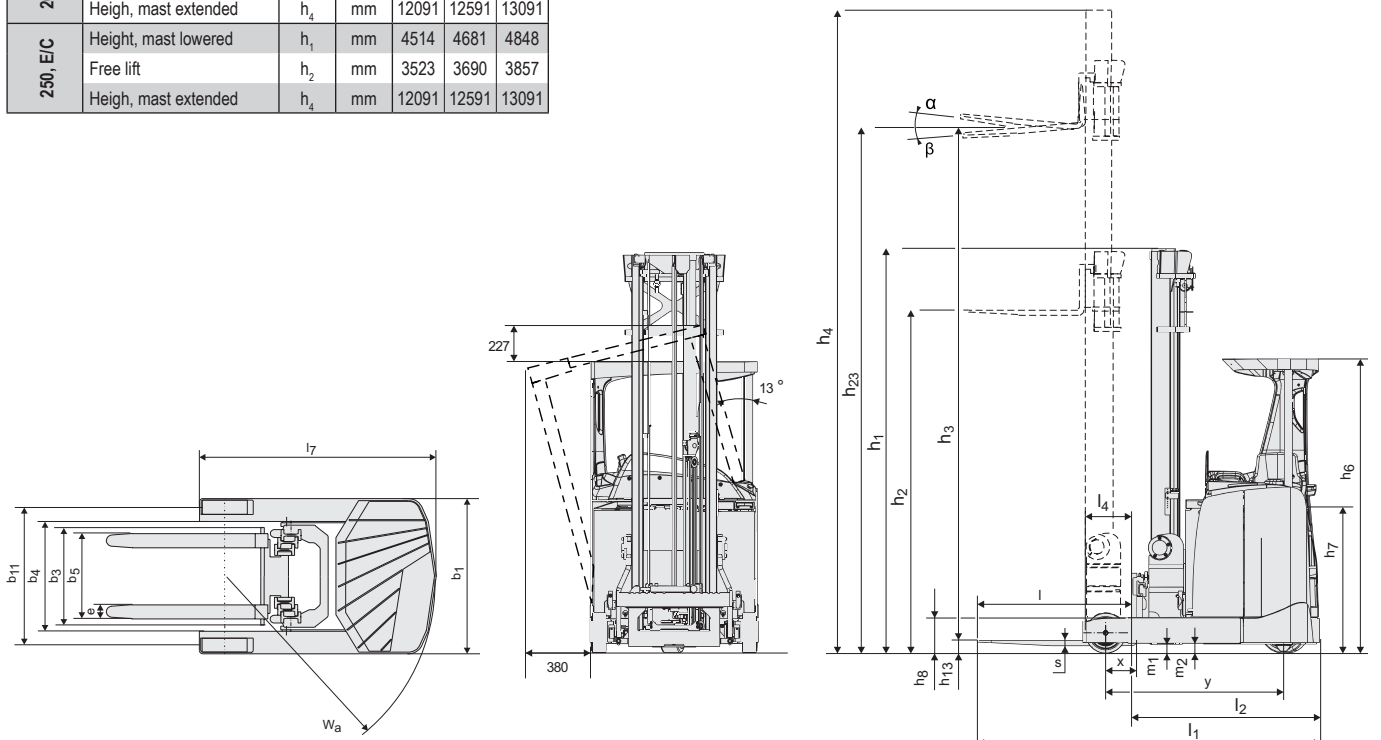
\*\*\* = Inclusive sideshift

3) Lh max 11500 mm

# Mast dimensions, mm

| RRE     |                       |          | Triplex Hi-Lo |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |
|---------|-----------------------|----------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
|         | Lift height           | $h_{23}$ | mm            | 4400 | 4600 | 4800 | 5400 | 5700 | 6300 | 6750 | 7000 | 7150 | 7500 | 8000 | 8200 | 8500 | 9000 | 9500  | 10000 | 10500 | 10800 | 11000 |
|         | Lift                  | $h_3$    | mm            | 4360 | 4560 | 4760 | 5360 | 5660 | 6260 | 6710 | 6960 | 7110 | 7460 | 7960 | 8160 | 8460 | 8960 | 9460  | 9960  | 10460 | 10760 | 10960 |
| 140,E/C | Height, mast lowered  | $h_1$    | mm            | 2067 | —    | 2200 | 2400 | 2500 | 2742 | —    | 3074 | 2991 | 3241 | 3408 | —    | 3574 | 3741 | —     | —     | —     | —     | —     |
|         | Free lift             | $h_2$    | mm            | 1016 | —    | 1149 | 1349 | 1449 | 1691 | —    | 2023 | 1940 | 2190 | 2357 | —    | 2523 | 2690 | —     | —     | —     | —     | —     |
|         | Height, mast extended | $h_4$    | mm            | 5050 | —    | 5450 | 6050 | 6350 | 6950 | —    | 7650 | 7450 | 8150 | 8650 | —    | 9150 | 9650 | —     | —     | —     | —     | —     |
| 160,E/C | Height, mast lowered  | $h_1$    | mm            | 2067 | —    | 2200 | 2400 | 2500 | 2742 | 2991 | 3074 | 2991 | 3241 | 3408 | 3474 | 3574 | 3741 | 3908  | 4300  | 4467  | —     | —     |
|         | Free lift             | $h_2$    | mm            | 1016 | —    | 1149 | 1349 | 1449 | 1691 | 1940 | 2023 | 1940 | 2190 | 2357 | 2423 | 2523 | 2690 | 2857  | 3249  | 3416  | —     | —     |
|         | Height, mast extended | $h_4$    | mm            | 5050 | —    | 5450 | 6050 | 6350 | 6950 | 7400 | 7650 | 7450 | 8150 | 8650 | 8850 | 9150 | 9650 | 10150 | 10650 | 11150 | —     | —     |
| 180,E/C | Height, mast lowered  | $h_1$    | mm            | —    | 2175 | 2242 | 2442 | 2542 | 2742 | 2991 | 3074 | 2991 | 3241 | 3408 | —    | 3574 | 3741 | 3908  | 4467  | 4800  | —     | 4800  |
|         | Free lift             | $h_2$    | mm            | —    | 1124 | 1191 | 1391 | 1491 | 1691 | 1940 | 2023 | 1940 | 2190 | 2357 | —    | 2523 | 2690 | 2857  | 3416  | 3749  | —     | 3749  |
|         | Height, mast extended | $h_4$    | mm            | —    | 5250 | 5450 | 6050 | 6350 | 6950 | 7400 | 7650 | 7450 | 8150 | 8650 | —    | 9150 | 9650 | 10150 | 10650 | 11150 | —     | 11650 |
| 200,E/C | Height, mast lowered  | $h_1$    | mm            | —    | 2175 | 2242 | 2442 | 2542 | 2742 | 2991 | 3074 | 2991 | 3241 | 3408 | 3474 | 3575 | 3741 | 3908  | 4014  | 4181  | 4281  | 4348  |
|         | Free lift             | $h_2$    | mm            | —    | 1124 | 1191 | 1391 | 1491 | 1691 | 1940 | 2023 | 1940 | 2190 | 2357 | 2423 | 2523 | 2690 | 2857  | 3025  | 3191  | 3291  | 3357  |
|         | Height, mast extended | $h_4$    | mm            | —    | 5250 | 5450 | 6050 | 6350 | 6950 | 7400 | 7650 | 7450 | 8150 | 8650 | 8850 | 9150 | 9650 | 10150 | 10591 | 11091 | 11391 | 11591 |
| 250,E/C | Height, mast lowered  | $h_1$    | mm            | —    | —    | 2281 | 2481 | —    | 2781 | —    | 3014 | —    | —    | 3348 | —    | 3514 | 3681 | 3848  | 4014  | 4181  | 4281  | —     |
|         | Free lift             | $h_2$    | mm            | —    | —    | 1291 | 1491 | —    | 1791 | —    | 2025 | —    | —    | 2357 | —    | 2525 | 2691 | 2857  | 3025  | 3191  | 3291  | —     |
|         | Height, mast extended | $h_4$    | mm            | —    | —    | 5391 | 5981 | —    | 6891 | —    | 7591 | —    | —    | 8591 | —    | 9091 | 9591 | 10091 | 10591 | 11091 | 11391 | —     |

| RRE     |                       |          | Triplex Hi-Lo |       |       |       |
|---------|-----------------------|----------|---------------|-------|-------|-------|
|         | Lift height           | $h_{23}$ | mm            | 11500 | 12000 | 12500 |
|         | Lift                  | $h_3$    | mm            | 11460 | 11960 | 12460 |
| 200,E/C | Height, mast lowered  | $h_1$    | mm            | 4514  | 4681  | 4848  |
|         | Free lift             | $h_2$    | mm            | 3523  | 3690  | 3857  |
|         | Height, mast extended | $h_4$    | mm            | 12091 | 12591 | 13091 |
| 250,E/C | Height, mast lowered  | $h_1$    | mm            | 4514  | 4681  | 4848  |
|         | Free lift             | $h_2$    | mm            | 3523  | 3690  | 3857  |
|         | Height, mast extended | $h_4$    | mm            | 12091 | 12591 | 13091 |



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## Truck features:

- Total view concept
- Car pedal layout
- Automatic parking brake
- TLC, Transitional Lift Control
- 360° steering
- Simultaneous hydraulic control
- Single function levers or multi function control
- Heavy duty drive unit and gear box



TP-Technical Publications, Sweden — 747500-040, version 12, 1603