

3 Technical data

3.1 AL 65

NOTE

The technical data refer to tires of size 12.5 - 18.

3.1.1 Machine

- Height	2680 mm
- Width (over tires)	1791 mm
- Wheel base	1950 mm
- Track width	1450 mm
- Operating weight without attachment	4350 kg
- Ground clearance	420 mm
- - vehicle centre	300 mm
- - rear axle gear	3800 mm
- Turning radius (across the rear)	40 °
- Articulation angle	40 °
- - left	40 °
- - right	60 %
- Climbing ability with payload	34 kN
- Max. lifting capacity	

3.1.2 Engine

- Oil-/air-cooled diesel engine	
- 4 cylinders, 4-stroke, direct injection	
- Displacement	2732 cm ³
- Power acc. to ISO 9249	37 kW at 2300 rpm

3.1.3 Starter

-	2.2 kW, 12 V
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3.1.4 Alternator

-	60 A, 14 V
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3.1.5 Hydrostatic traction drive

- Stage I	0.....7 km/h
- Stage II	0.....20 km/h

3.1.6 Axle loads

- | | | |
|------------------------------------|---------|---------|
| - Perm. axle loads acc. to StVZO | - front | 3500 kg |
| | - rear | 4000 kg |
| - Perm. total weight acc. to StVZO | | 6000 kg |

3.1.7 Tires

The following tire sizes are permitted:

- | | | |
|------------|---------|----------------|
| - Size | | 12.5 - 18 10PR |
| - Pressure | - front | 3.0 bar |
| | - rear | 2.5-3.0 bar |
| - Size | | 335/80 R 18 |
| - Pressure | - front | 2.2 bar |
| | - rear | 1.8-2.2 bar |
| - Size | | 15.5/55 R 18 |
| - Pressure | - front | 3.2 bar |
| | - rear | 2.7-3.2 bar |
| - Size | | 405/70 R 18 |
| - Pressure | - front | 2.0 bar |
| | - rear | 1.7-2.0 bar |

3.1.8 Steering system

- | | |
|--------------------------------------|--------------|
| - Hydrostatically via priority valve | |
| - Pressure | max. 180 bar |

3.1.9 Brake system

- Hydraulic service brake (front axle: wet lamella brake), acting on all four wheels via a cardan shaft.
- Hydraulic parking brake/auxiliary brake system (front axle: wet lamella brake), acting on the front axle via a spring reservoir and on all four wheels via a cardan shaft.

3.1.10 Electrical system

- | | |
|-----------|-------|
| - Battery | 88 Ah |
|-----------|-------|

3.1.11 Hydraulic system

- Contents 100 l
- Hydraulic oil reservoir 70 l
- Flow rate 61 l/min
- Max. operating pressure 190 bar
- 2 lifting cylinders Ø 80/50 mm
- 1 tilt cylinder Ø 100/60 mm
- 1 steering cylinder Ø 85/35 mm
- Times acc. to DIN ISO 7131
- Lift (with payload) 5.8 s
- Lower (without payload) 3.8 s
- Dump 90° 1.2 s
- Tilt 45° 1.0 s

3.1.12 Fuel supply system

- Contents fuel tank 70 l

3.1.13 Heating and ventilation system

- Oil heater COBO
- Type 2/9008/COMB-10/A45
- Heat output, 3-stage $Q_{80} \text{ max. } 10.5 \text{ kW at } \dot{V}_{\text{oil}} 30 \text{ l/min}$
- Fan power, 3-stage max. 785 m³/h

3.1.14 Return-flow suction filter

- Filter mesh 15 µm abs.
- By-pass activation pressure $\Delta p = 2.5 \text{ bar}$
- Pretension 0.5 bar

3.1.15 Electrical contamination indicator

- Activation pressure $p = 2 \text{ bar}$

3.1.16 Oil cooler with temperature-controlled fan

- Power max. 15 kW
- Flow rate 23 l/min

3.2 AL 75

NOTE

The technical data refer to tires of size 365/80 R 20.

3.2.1 Machine

- Height	2695 mm
- Width (over tires)	1840 mm
- Wheel base	1950 mm
- Track width	1440 mm
- Operating weight without attachment	4620 kg
- Ground clearance	457 mm
- - vehicle centre	
- - rear axle gear	330 mm
- Turning radius (across the rear)	3800 mm
- Articulation angle	40 °
- - left	
- - right	40 °
- Climbing ability with payload	60 %
- Max. lifting capacity	41 kN

3.2.2 Engine

- Oil-/air-cooled diesel engine	
- 4 cylinders, 4-stroke, direct injection	
- Displacement	2732 cm ³
- Power acc. to ISO 9249	44 kW at 2300 rpm

3.2.3 Starter

-	2.2 kW, 12 V
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3.2.4 Alternator

-	60 A, 14 V
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3.2.5 Hydrostatic traction drive

"20 km/h" model

- Stage I	0.....7 km/h
- Stage II	0.....20 km/h

"30 km/h" model

Gear stage 1

- Stage I	0.....7 km/h
- Stage II	0.....15 km/h

Gear stage 2

- Stage I 0.....14 km/h
- Stage II 0.....30 km/h

3.2.6 Axle loads

- Perm. axle loads acc. to StVZO - front 3500 kg
- - rear 4000 kg
- Perm. total weight acc. to StVZO 6000 kg

3.2.7 Tires

The following tire sizes are permitted:

- Size 365/70 R 18
- Pressure - front 3.7 bar
- - rear 3.0-3.7 bar
- Size 405/70 R 18
- Pressure - front 3.0 bar
- - rear 2.5-3.0 bar
- Size 365/80 R 20
- Pressure - front 3.0 bar
- - rear 2.5-3.0 bar
- Size 375/75 R 20
- Pressure - front 3.0 bar
- - rear 2.5-3.0 bar

3.2.8 Steering system

- Hydrostatically via priority valve
- Pressure max. 180 bar

3.2.9 Brake system

- Hydraulic service brake (front axle: wet lamella brake), acting on all four wheels via a cardan shaft.
- Hydraulic parking brake/auxiliary brake system (front axle: wet lamella brake), acting on the front axle via a spring reservoir and on all four wheels via a cardan shaft.

3.2.10 Electrical system

- Battery 88 Ah

3.2.11 Hydraulic system

- Contents 100 l
- Hydraulic oil reservoir 70 l
- Flow rate 61 l/min
- Max. operating pressure 230 bar
- 2 lifting cylinders Ø 80/50 mm
- 1 tilt cylinder Ø 100/60 mm
- 1 steering cylinder Ø 85/35 mm
- Times acc. to DIN ISO 7131
- Lift (with payload) 5.8 s
- Lower (without payload) 3.8 s
- Dump 90° 1.2 s
- Tilt 45° 1.0 s

3.2.12 Fuel supply system

- Contents fuel tank 70 l

3.2.13 Heating and ventilation system

- Oil heater COBO
- Type 2/9008/COMB-10/A45
- Heat output, 3-stage $Q_{80,max.}$ 10.5 kW at $\dot{V}_{oil}$ 30 l/min
- Fan power, 3-stage max. 785 m³/h

3.2.14 Return-flow suction filter

- Filter mesh 15 µm abs.
- By-pass activation pressure $\Delta p = 2.5$ bar
- Pretension 0.5 bar

3.2.15 Electrical contamination indicator

- Activation pressure $p = 2$ bar

3.2.16 Oil cooler with temperature-controlled fan

- Power max. 15 kW
- Flow rate 23 l/min

3.3 AL 95

NOTE

The technical data refer to tires of size 14.5 - 20.

3.3.1 Machine

- Height	2720 mm
- Width (over tires)	1823 mm
- Wheel base	1950 mm
- Track width	1440 mm
- Operating weight without attachment	5050 kg
- Ground clearance - vehicle centre	467 mm
- - rear axle gear	340 mm
- Turning radius (across the rear)	3800 mm
- Articulation angle - left	40 °
- - right	40 °
- Climbing ability with payload	60 %
- Max. lifting capacity	51 kN

3.3.2 Engine

- Oil-/air-cooled diesel engine	
- 4 cylinders, 4-stroke, direct injection	
- Displacement	2732 cm³
- Power acc. to ISO 9249	51.5 kW at 2500 rpm

3.3.3 Starter

-	2.2 kW, 12 V
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3.3.4 Alternator

-	60 A, 14 V
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3.3.5 Hydrostatic traction drive

"20 km/h" model

- Stage I	0.....7 km/h
- Stage II	0.....20 km/h

"30 km/h" model

Gear stage 1

- Stage I	0.....7 km/h
- Stage II	0.....14 km/h

Gear stage 2

- Stage I 0.....15 km/h
- Stage II 0.....30 km/h

3.3.6 Axle loads

- Perm. axle loads acc. to StVZO - front 3500 kg
- - rear 4000 kg
- Perm. total weight acc. to StVZO 6000 kg

3.3.7 Tires

The following tire sizes are permitted:

- Size 14.5 - 20 10PR
- Pressure - front 3.0 bar
- - rear 2.5-3.0 bar
- Size 365/80 R 20
- Pressure - front 3.0 bar
- - rear 2.5-3.0 bar
- Size 375/75 R 20
- Pressure - front 3.0 bar
- - rear 2.5-3.0 bar
- Size 405/70 R 20
- Pressure - front 2.5 bar
- - rear 2.0-2.5 bar

3.3.8 Steering system

- Hydrostatically via priority valve
- Pressure max. 180 bar

3.3.9 Brake system

- Hydraulic service brake (front axle: wet lamella brake), acting on all four wheels via a cardan shaft.
- Hydraulic parking brake/auxiliary brake system (front axle: wet lamella brake), acting on the front axle via a spring reservoir and on all four wheels via a cardan shaft.

3.3.10 Electrical system

- Battery 88 Ah

3.3.11 Hydraulic system

- Contents 100 l
- Hydraulic oil reservoir 70 l
- Flow rate 80 l/min
- Max. operating pressure 230 bar
- 2 lifting cylinders Ø 90/50 mm
- 1 tilt cylinder Ø 110/70 mm
- 1 steering cylinder Ø 85/35 mm
- Times acc. to DIN ISO 7131
- Lift (with payload) 5.7 s
- Lower (without payload) 4.0 s
- Dump 90° 1.3 s
- Tilt 45° 1.1 s

3.3.12 Fuel supply system

- Contents fuel tank 70 l

3.3.13 Heating and ventilation system

- Oil heater COBO
- Type 2/9008/COMB-10/A45
- Heat output, 3-stage Q_{80} max. 10.5 kW at $\dot{V}_{oil}$ 30 l/min
- Fan power, 3-stage max. 785 m³/h

3.3.14 Return-flow suction filter

- Filter mesh 15 µm abs.
- By-pass activation pressure $\Delta p = 2.5$ bar
- Pretension 0.5 bar

3.3.15 Electrical contamination indicator

- Activation pressure $p = 2$ bar

3.3.16 Oil cooler with temperature-controlled fan

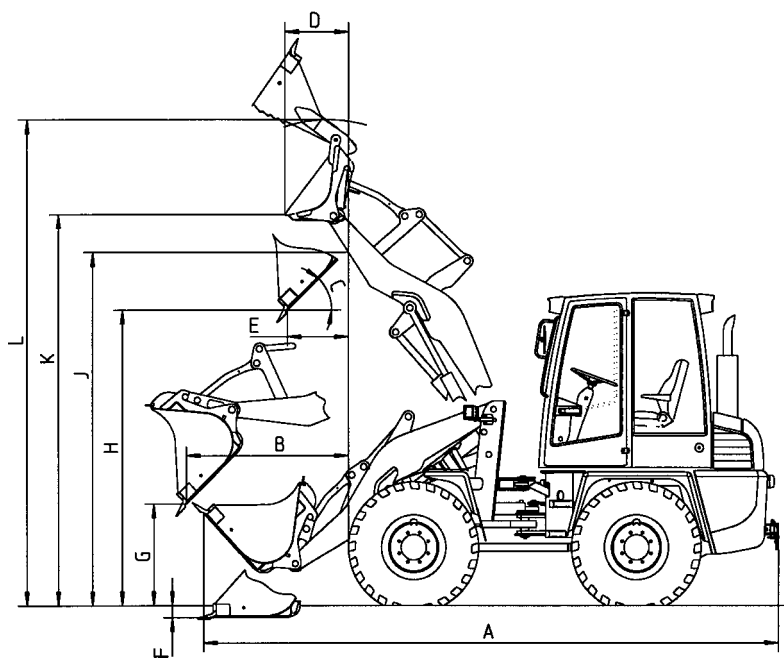
- Power max. 15 kW
- Flow rate 25 l/min

3.4 Attachments AL 65

NOTE

- The technical data refer to tires of size 12.5 - 18.

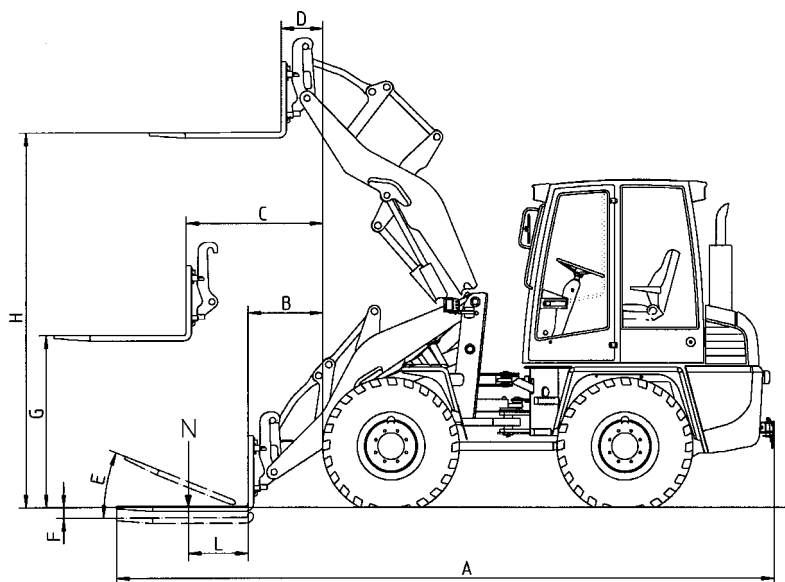
3.4.1 Buckets



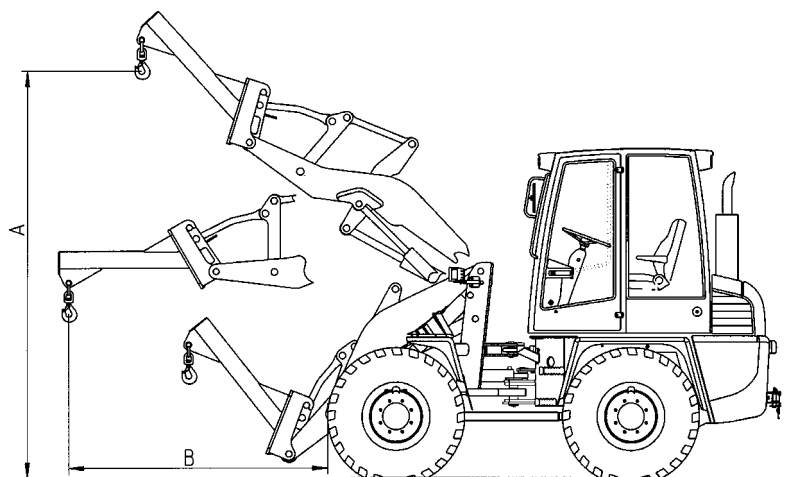
3.4.1 Buckets

Bucket type		Standard bucket	Light-weight bucket	Multi-purpose bucket
Bucket volume	m ³	0.65	1.0	0.55
Bucket width	mm	1800	2000	1870
Bulk density	t/m ³	1.8	1.1	1.9
Rated payload (DIN 24094)				
- frontal	kg	1650		
- swiveled	kg	1455	1285	1245
Rated payload (ISO 8313)				
- frontal	kg			
- swiveled	kg			
Rated dump load (DIN 24094)				
- frontal	kg	3300		
- swiveled	kg	2910	2570	2490
Rated dump load (ISO 8313)				
- frontal	kg			
- swiveled	kg			
Tear-out force (ISO 8313)	daN	4230	3450	4425
Pushing force	kN	3,53	3,53	3,53
Dead weight	kg	250	330	410
A Overall length				
acc. to ISO 7131	mm	5080	5090	4990
B Max. dumping distance				
at dump angle 45°	mm	1340	1455	1325
C Dump angle	°	45	45	45
Max. dump angle	°	51	50	56
E Dumping distance				
at max. lifting height and				
dump angle 45°	mm	535	670	660
F Depth of feed-in	mm	135	155	140
G Dumping height at				
max. dumping distance				
and dump angle 45°	mm	880	765	900
H Dumping height at				
max. lifting height				
and dump angle 45°	mm	2565	2455	2335
J Free lift height	mm	2940	2935	2900
Multi-purpose bucket opened:				
D Max. dumping distance				
at max. lifting height and				
swivelled bucket	mm			615
K Max. dumping height with				
swivelled bucket	mm			3355

3.4.2 Fork-liftattachment



3.4.3 Lifting hook



3.4.2 Fork-lift attachment

Fork length	1100 mm
Fork height	45 mm

Fork spacing (centre - centre)	
- min.	216 mm
- max.	1054 mm

Perm. rated load **N** acc. to DIN 24094

- frontal	
- level terrain (stability safety factor 1.25)	2165 kg
- rough terrain (stability safety factor 1.67)	1620 kg
- swiveled	
- level terrain (stability safety factor 1.25)	1910 kg
- rough terrain (stability safety factor 1.67)	1430 kg

Perm. rated load **N** acc. to ISO 8313

- frontal	
- level terrain (stability safety factor 1.25)	1940 kg
- rough terrain (stability safety factor 1.67)	1455 kg
- swiveled	
- level terrain (stability safety factor 1.25)	1535 kg
- rough terrain (stability safety factor 1.67)	1150 kg

Dead weight	192 kg
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A Total length	5550 mm
B Min. operating span	750 mm
C Max. operating span	1210 mm
D Operating span at max. lifting height	410 mm
E Tilt angle	12 °
F Depth of feed-in	105 mm
G Free lift height at max. reach	1390 mm
H Free lift height at max. lifting height	3080 mm
L Distance of rated load N from fork back	500 mm

3.4.3 Lifting hook

Permissible payload according to DIN EN 474-3

- Max. outreach (stability safety factor 2)	750 kg
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Dead weight	145 kg
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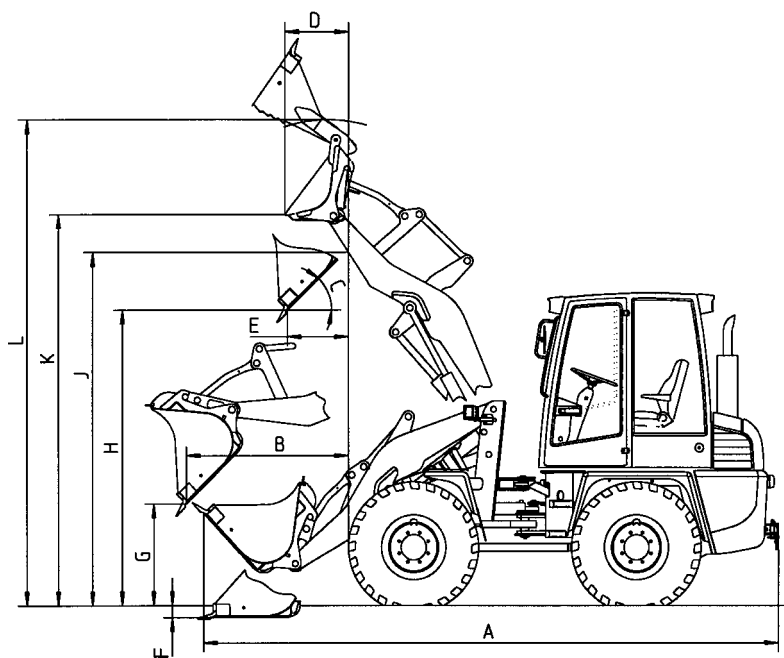
A Max. lifting height	3300 mm
B Max. outreach	2200 mm

3.5 Attachments AL 75

NOTE

- The technical data refer to tires of size 365/80 R 20.

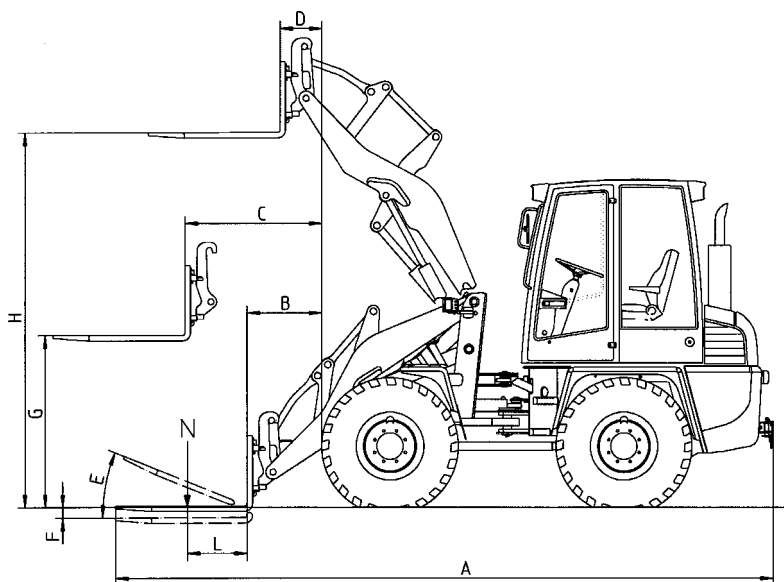
3.5.1 Buckets



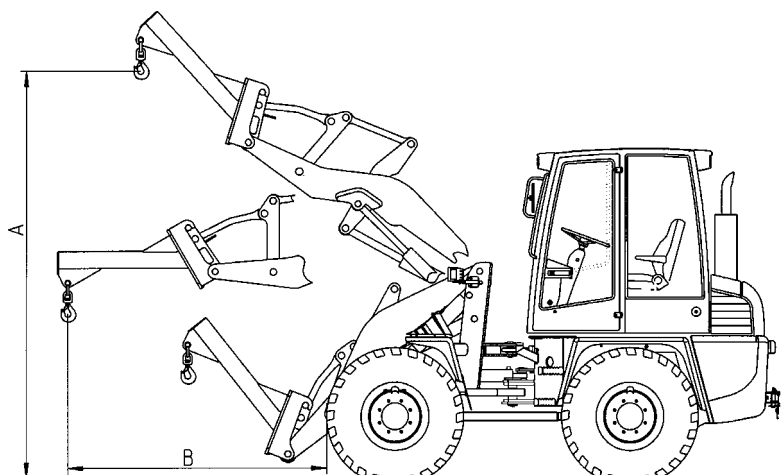
3.5.1 Buckets

Bucket type		Standard bucket	Light-weight bucket	Multi-purpose bucket
Bucket volume	m ³	0.75	1.2	0.65
Bucket width	mm	1850	2000	1850
Bulk density	t/m ³	1.8	1.1	1.9
Rated payload (DIN 24094)				
- frontal	kg	1835		
- swiveled	kg	1620	1375	1340
Rated payload (ISO 8313)				
- frontal	kg			
- swiveled	kg			
Rated dump load (DIN 24094)				
- frontal	kg	3670		
- swiveled	kg	3240	2750	2680
Rated dump load (ISO 8313)				
- frontal	kg			
- swiveled	kg			
Tear-out force (ISO 8313)	daN	4560	3625	4405
Dead weight	kg	272	360	430
A Overall length				
acc. to ISO 7131	mm	5065	5100	4990
B Max. dumping distance				
at dump angle 45°	mm	1330	1465	1335
C Dump angle	°	45	45	45
Max. dump angle	°	50	50	54
E Dumping distance				
at max. lifting height and				
dump angle 45°	mm	540	685	680
F Depth of feed-in	mm	115	115	115
G Dumping height at				
max. dumping distance				
and dump angle 45°	mm	875	735	865
H Dumping height at				
max. lifting height				
and dump angle 45°	mm	2560	2425	2430
J Free lift height	mm	3055	3055	3055
Multi-purpose bucket opened:				
D Max. dumping distance				
at max. lifting height and				
swivelled bucket	mm			560
K Max. dumping height with				
swivelled bucket	mm			3395

3.5.2 Fork-liftattachment



3.5.3 Lifting hook



3.5.2 Fork-lift attachment

Fork length	1100 mm
Fork height	45 mm

Fork spacing (centre - centre)	
- min.	216 mm
- max.	1054 mm

Perm. rated load **N** acc. to DIN 24094

- frontal	
- level terrain (stability safety factor 1.25)	2415 kg
- rough terrain (stability safety factor 1.67)	1810 kg
- swiveled	
- level terrain (stability safety factor 1.25)	2130 kg
- rough terrain (stability safety factor 1.67)	1600 kg

Perm. rated load **N** acc. to ISO 8313

- frontal	
- level terrain (stability safety factor 1.25)	2190 kg
- rough terrain (stability safety factor 1.67)	1640 kg
- swiveled	
- level terrain (stability safety factor 1.25)	1705 kg
- rough terrain (stability safety factor 1.67)	1280 kg

Dead weight	192 kg
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A Total length	5470 mm
B Min. operating span	665 mm
C Max. operating span	1145 mm
D Operating span at max. lifting height	350 mm
E Tilt angle	21 °
F Depth of feed-in	95 mm
G Free lift height at max. reach	1370 mm
H Free lift height at max. lifting height	3045 mm
L Distance of rated load N from fork back	500 mm

3.5.3 Lifting hook

Permissible payload according to DIN EN 474-3

- Max. outreach (stability safety factor 2)	850 kg
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Dead weight	145 kg
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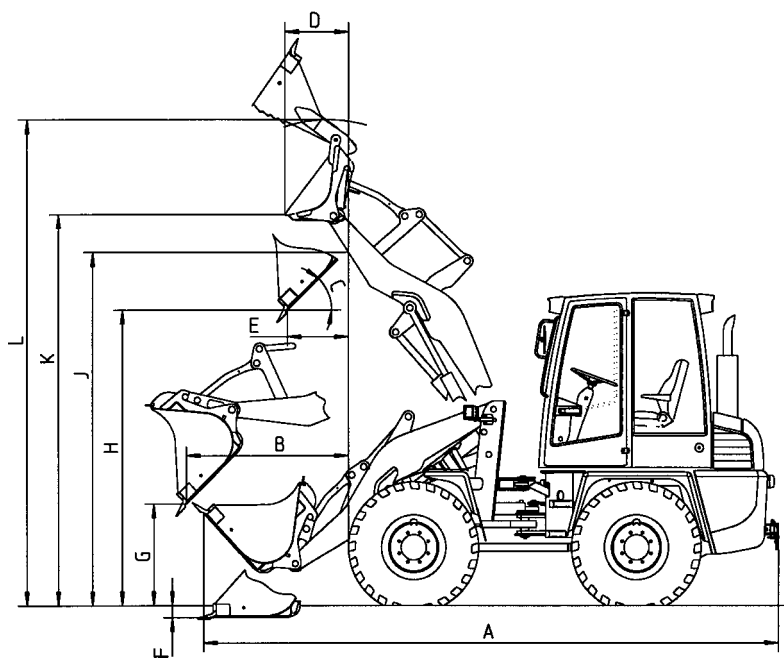
A Max. lifting height	3340 mm
B Max. outreach	2150 mm

3.6 Attachments AL 95

NOTE

- The technical data refer to tires of size 14.5 - 20.

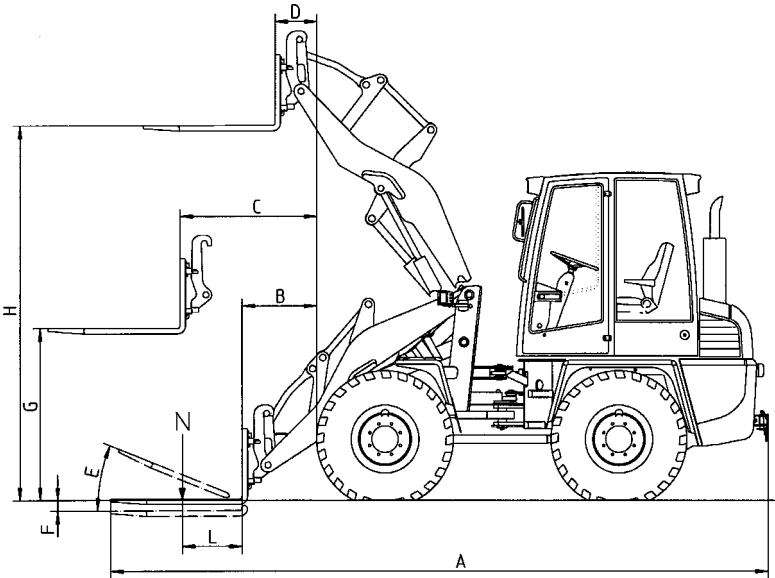
3.6.1 Buckets



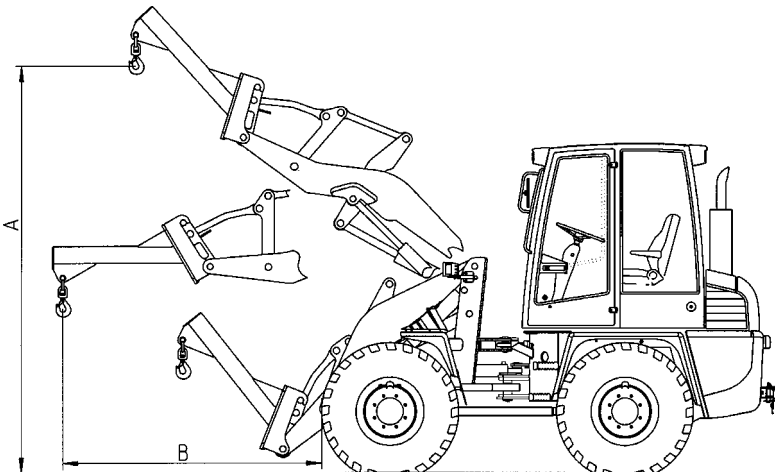
3.6.1 Buckets

Bucket type		Standard bucket	Light-weight bucket	Multi-purpose bucket
Bucket volume	m ³	0.9	1.4	0.75
Bucket width	mm	1950	2000	2000
Bulk density	t/m ³	1.8	1.1	1.9
Rated payload (DIN 24094)				
- frontal	kg	2110		
- swiveled	kg	1860	1665	1630
Rated payload (ISO 8313)				
- frontal	kg			
- swiveled	kg	1330		
Rated dump load (DIN 24094)				
- frontal	kg	4220		
- swiveled	kg	3720	3330	3260
Rated dump load (ISO 8313)				
- frontal	kg			
- swiveled	kg	2660		
Tear-out force (ISO 8313)	daN	5390	4095	5135
Shearing force	kN	41.7		
Dead weight	kg	300	390	460
A Overall length				
acc. to ISO 7131	mm	5080	5165	5030
B Max. dumping distance				
at dump angle 45°	mm	1350	1530	1370
C Dump angle	°	45	45	45
Max. dump angle	°	50	50	54
E Dumping distance				
at max. lifting height and				
dump angle 45°	mm	560	750	715
F Depth of feed-in	mm	105	105	105
G Dumping height at				
max. dumping distance				
and dump angle 45°	mm	860	680	830
H Dumping height at				
max. lifting height				
and dump angle 45°	mm	2545	2370	2515
J Free lift height	mm	3075	3075	3075
Multi-purpose bucket opened:				
D Max. dumping distance				
at max. lifting height and				
swivelled bucket	mm			555
K Max. dumping height with				
swivelled bucket	mm			3405

3.6.2 Fork-liftattachment



3.6.3 Lifting hook



3.6.2 Fork-lift attachment

Fork length	1100 mm
Fork height	45 mm

Fork spacing (centre - centre)	
- min.	216 mm
- max.	1054 mm

Perm. rated load **N** acc. to DIN 24094

- frontal	
- level terrain (stability safety factor 1.25)	2800 kg
- rough terrain (stability safety factor 1.67)	2100 kg
- swiveled	
- level terrain (stability safety factor 1.25)	2470 kg
- rough terrain (stability safety factor 1.67)	1850 kg

Perm. rated load **N** acc. to ISO 8313

- frontal	
- level terrain (stability safety factor 1.25)	2565 kg
- rough terrain (stability safety factor 1.67)	1925 kg
- swiveled	
- level terrain (stability safety factor 1.25)	2010 kg
- rough terrain (stability safety factor 1.67)	1510 kg

Dead weight	192 kg
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A Total length	5460 mm
B Min. operating span	650 mm
C Max. operating span	1140 mm
D Operating span at max. lifting height	345 mm
E Tilt angle	21 °
F Depth of feed-in	85 mm
G Free lift height at max. reach	1375 mm
H Free lift height at max. lifting height	3055 mm
L Distance of rated load N from fork back	500 mm

3.6.3 Lifting hook

Permissible payload according to DIN EN 474-3

- Max. outreach (stability safety factor 2)	1000 kg
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Dead weight	145 kg
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A Max. lifting height	3350 mm
B Max. outreach	2145 mm

