

3 Technical data

3.1 AL 70e

NOTE

The technical data refer to tires of size 335/80 R 18.

3.1.1 Machine

- Height	2665 mm
- Width (over tires)	1775 mm
- Wheel base	1950 mm
- Track width	1450 mm
- Operating weight without attachment	4380 kg
- Ground clearance	- vehicle centre 420 mm
	- rear axle gear 295 mm
- Turning radius (across the rear)	3900 mm
- Articulation angle	- left 40 °
	- right 40 °
- Embankment angle	27 °
- Climbing ability with payload	60 %
- Max. lifting capacity	34 kN

3.1.2 Engine

- Oil-/air-cooled diesel engine	
- 4 cylinders, 4-stroke, direct injection	
- Displacement	2732 cm ³
- Power according to ECE 24/03 appendices 10	36,5 kW at 2300 rpm
- Exhaust emission regulation according to EPA nonroad TIER 1	

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 | | 335/80 R 18 |
| - Pressure | - front | 3,0 bar |
| | - rear | 3,0 bar |
| - Size | | 12.5 - 18 10PR |
| - Pressure | - front | 3,0 bar |
| | - rear | 2,5-3,0 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 | 3,0 bar |
| | - rear | 2,5-3,0 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} max. 10.5 kW at $\dot{V}_{oil}$ 30 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	$\Delta p = 2.5$ bar
- Pretension	0.5 bar

3.1.15 Electrical contamination indicator

- Activation pressure	$p = 2$ bar
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3.1.16 Oil cooler with temperature-controlled fan

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

3.2 AL 85t

NOTE

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

3.2.1 Machine

- Height	2720 mm
- Width (over tires)	1790 mm
- Wheel base	1950 mm
- Track width	1440 mm
- Operating weight without attachment	4680 kg
- Ground clearance	- vehicle centre 484 mm
	- rear axle gear 345 mm
- Turning radius (across the rear)	3900 mm
- Articulation angle	- left 40 °
	- right 40 °
- Embankment angle	30 °
- 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 according to ISO 9249	44 kW at 2300 rpm
- Exhaust emission regulation according to RL 97/68 EC step 1 + EPA nonroad TIER	

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
- Size 405/70 R 20
- Pressure
 - front 3,0 bar
 - rear 2,5-3,0 bar
- Size 14.5 - 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	$Q_{80} \text{ max. } 10.5 \text{ kW at } \dot{V}_{\text{oil}} 30 \text{ l/min}$
- Fan power,	
3-stage	max. 785 m³/h

3.2.14 Return-flow suction filter

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

3.2.15 Electrical contamination indicator

- Activation pressure	$p = 2 \text{ bar}$
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3.2.16 Oil cooler with temperature-controlled fan

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

3.3 AL 100t

NOTE

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

3.3.1 Machine

- Height	2720 mm
- Width (over tires)	1790 mm
- Wheel base	1950 mm
- Track width	1440 mm
- Operating weight without attachment	5060 kg
- Ground clearance	- vehicle centre 484 mm
	- rear axle gear 345 mm
- Turning radius (across the rear)	3900 mm
- Articulation angle	- left 40 °
	- right 31 °
- Embankment angle	31 °
- 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 cm ³
- Power according to ISO 9249	51,5 kW at 2500 rpm
- Exhaust emission regulation according to RL 97/68 EC step 1 + EPA nonroad TIER 1	

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 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
- Size 405/70 R 20
 - Pressure
 - front 3,0 bar
 - rear 2,5-3,0 bar
- Size 14,5 - 20
 - Pressure
 - front 3,0 bar
 - rear 2,5-3,0 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	$Q_{80} \text{ max. } 10.5 \text{ kW at } \dot{V}_{\text{oil}} 30 \text{ l/min}$
- Fan power, 3-stage	max. 785 m³/h

3.3.14 Return-flow suction filter

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

3.3.15 Electrical contamination indicator

- Activation pressure	$p = 2 \text{ bar}$
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3.3.16 Oil cooler with temperature-controlled fan

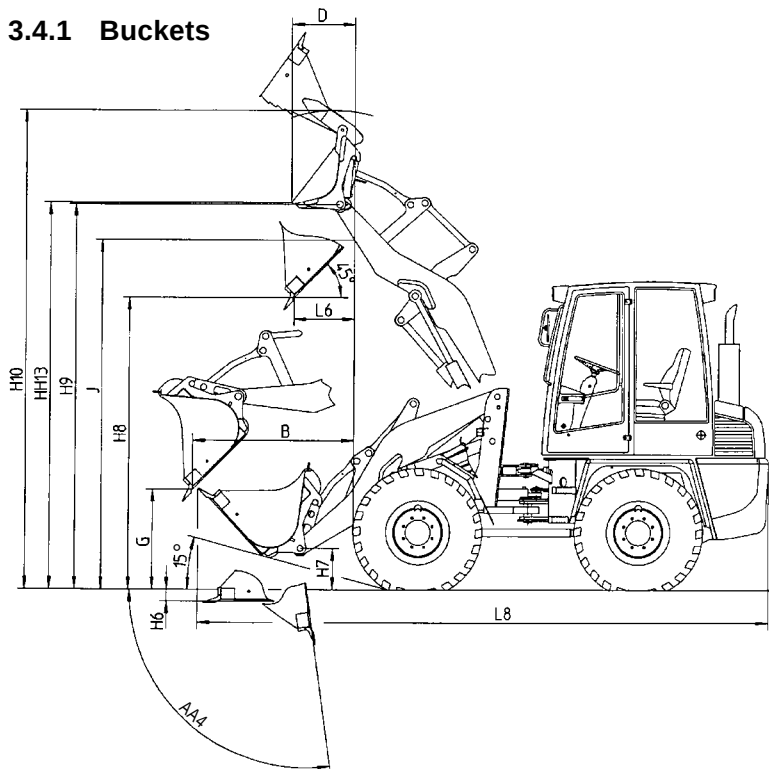
- Power	max. 15 kW
- Flow rate	25 l/min

3.4 Attachments AL 70e

NOTE

- The technical data refer to tires of size 335/80 R 18.

3.4.1 Buckets



Bucket type

Standard bucket

Bucket volume	m ³	0,7
Bucket width	mm	1800
Dead weight	kg	260
Loads according to DIN 24094 *		
Bulk density	t/m ³	2,0
Rated dump load		
- frontal	kg	3240
- swiveled	kg	2840
Rated payload		
- frontal	kg	1620
- swiveled	kg	1420
Operating weight without attachment *	kg	4620

* with water in the rear axle wheels

3.4.1 Buckets

Bucket type

		<i>Standard bucket</i>	<i>Lightweight bucket</i>	<i>Multi-purpose bucket</i>
Bucket volume	m ³	0,7	1,0	0,55
Bucket width	mm	1800	2000	1870
Dead weight	kg	260	302	454
Loads according to DIN 24094				
Bulk density	t/m ³	1,9	1,25	2,0
Rated dump load				
- frontal	kg	2990	2880	2840
- swiveled	kg	2620	2520	2470
Rated payload				
- frontal	kg	1495	1440	1420
- swiveled	kg	1310	1260	1235
Loads according to ISO 8313				
Bulk density	t/m ³	1,65	1,1	1,8
Rated dump load				
- frontal	kg	2800	2700	2660
- swiveled	kg	2240	2140	2100
Rated payload				
- frontal	kg	1400	1350	1330
- swiveled	kg	1120	1070	1050
Tear-out force (ISO 8313)	daN	4230	3450	4425
Pushing force	kN	35,3	35,3	35,3
AA4 Max. dump angle	°	93	93	90
B Max. dumping distance				
at dump angle 45°	mm	1285	1340	1380
G Dumping height at				
max. dumping distance				
and dump angle 45°	mm	880		790
H6 Depth of feed-in	mm	135		175
H7 Distance to the bolt center				
(quick-change device)	mm	410	410	410
H8 Dumping height at				
max. lifting height				
and dump angle 45°	mm	2575	2550	2490
H9 Distance to the bolt center				
(quick-change device)	mm	3355	3355	3355
H10 Maximum working height	mm	4030		4055
J Free lift height	mm	2960	2960	2960
L6 Dumping distance				
at max. lifting height and				
dump angle 45°	mm	530	550	535
L8 Overall length	mm	5055		5040
Angle, transport position	°	49	49	49
Multi-purpose bucket opened:				
D Max. dumping distance				
at max. lifting height and				
swivelled bucket	mm	-	-	565
HH13 Max. dumping height with				
swivelled bucket	mm	-	-	3325

NOTE

- The technical data refer to tires of size 405/70 R 18.

Bucket type:

Standard bucket

Bucket volume	m ³	0,7
Bucket width	mm	1950
Dead weight	kg	262

Loads according to DIN 24094

Bulk density	t/m ³	1,9
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Rated dump load

- frontal	kg	3000
- swiveled	kg	2630

Rated payload

- frontal	kg	1500
- swiveled	kg	1315

Loads according to ISO 8313

Bulk density	t/m ³	1,65
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Rated dump load

- frontal	kg	2810
- swiveled	kg	2240

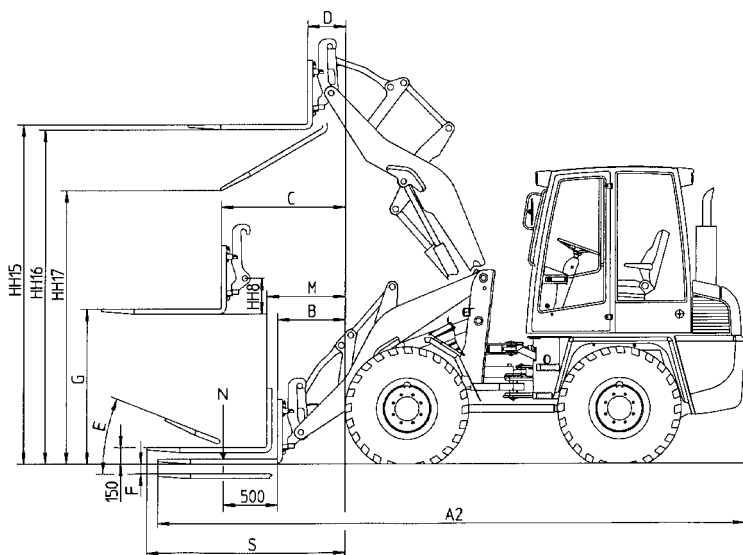
Rated payload

- frontal	kg	1405
- swiveled	kg	1120

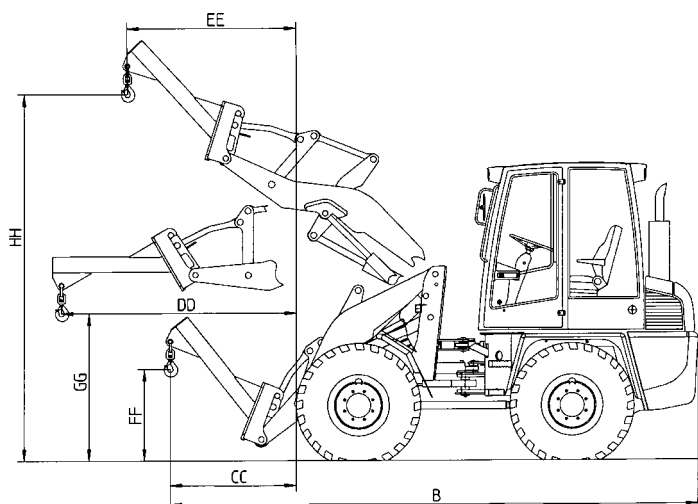
Tear-out force (ISO 8313)

Pushing force	daN	35,3
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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
Dead weight	192 kg

Permissible payload N acc. to DIN 24094 frontal

- level terrain (stability safety factor 1.25)	2020 kg
- rough terrain (stability safety factor 1.67)	1515 kg

swiveled

- level terrain (stability safety factor 1.25)	1775 kg
- rough terrain (stability safety factor 1.67)	1330 kg

Permissible payload N acc. to ISO 8313 frontal

- level terrain (stability safety factor 1.25)	1920 kg
- rough terrain (stability safety factor 1.67)	1440 kg

swiveled

- level terrain (stability safety factor 1.25)	1575 kg
- rough terrain (stability safety factor 1.67)	1180 kg

Permissible payload N acc. to ISO 8313 (height of upper tine edge: 150 mm)

frontal

- level terrain (stability safety factor 1.25)	2380 kg
- rough terrain (stability safety factor 1.67)	1780 kg

swiveled

- level terrain (stability safety factor 1.25)	2000 kg
- rough terrain (stability safety factor 1.67)	1500 kg

A2	Total length	5515 mm
B	Min. operating span	710 mm
C	Max. operating span	1200 mm
D	Operating span at max. lifting height	380 mm
E	Tilt angle	15 °
F	Depth of feed-in	75 mm
G	Free lift height at max. reach	1415 mm
HH15	Free lift height at max. lifting height (Upper edge of tines)	3125 mm
HH16	Free lift height at max. lifting height (Lower edge of tines)	3080 mm
HH17	Height with maximum lifting height and tilted tines	2445 mm
M	Reach (height of upper tine edge: 150 mm)	785 mm
S	Distance between tire and tine point (height of upper tine edge: 150 mm)	1885 mm

3.4.3 Lifting hook

Permissible payload according to DIN EN 474-3

- Max. outreach (stability safety factor 2)	750 kg
Dead weight	145 kg

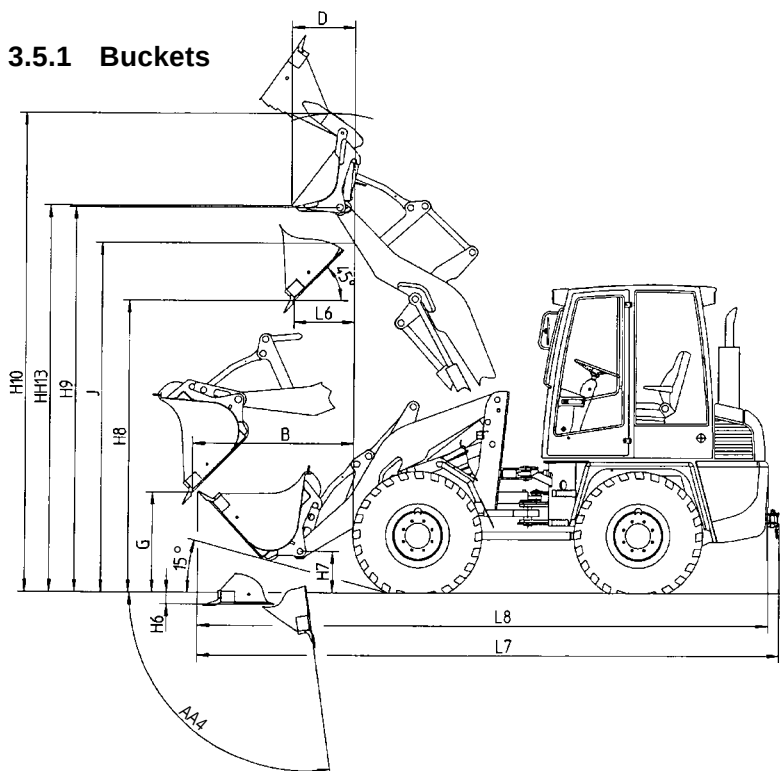
B	Total length	4815 mm
CC	Minimum reach with bucket arm in lowermost position	1200 mm
DD	Max. outreach	2210 mm
EE	Reach with bucket arm in uppermost position	1050 mm
FF	Min. lifting height	825 mm
GG	Lifting height with maximum reach	1300 mm
HH	Max. lifting height	3950 mm

3.5 Attachments AL 85t

NOTE

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

3.5.1 Buckets



Bucket type

Standard bucket

Bucket volume	m ³	0,8
Bucket width	mm	1850
Dead weight	kg	283
Loads according to DIN 24094 *		
Bulk density	t/m ³	2,0
Rated dump load		
- frontal	kg	3670
- swiveled	kg	3230
Rated payload		
- frontal	kg	1835
- swiveled	kg	1615
Operating weight without attachment *	kg	4990

* with water in the rear axle wheels

3.5.1 Buckets

Bucket type

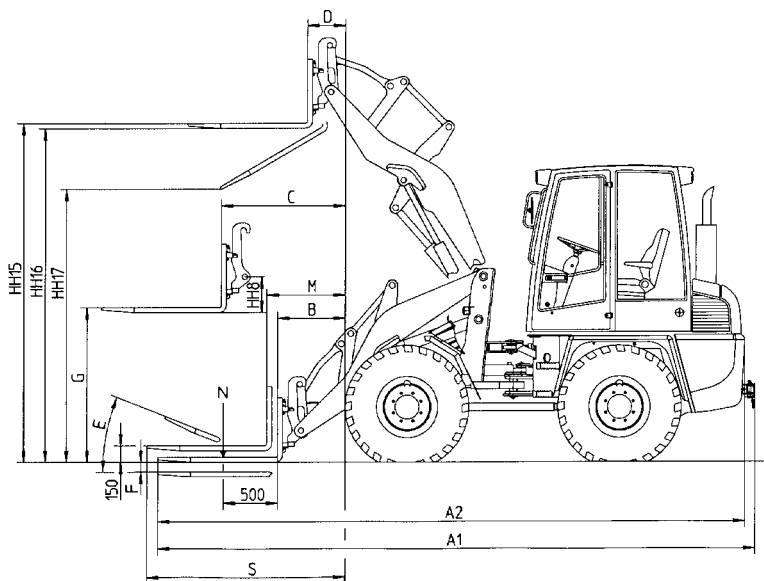
		<i>Standard bucket</i>	<i>Lightweight bucket</i>	<i>Multi-purpose bucket</i>
Bucket volume	m ³	0,8	1,2	0,65
Bucket width	mm	1850	2000	1850
Dead weight	kg	283	378	430
Loads according to DIN 24094				
Bulk density	t/m ³	1,8	1,1	1,9
Rated dump load				
- frontal	kg	3340	3160	3160
- swiveled	kg	2930	2760	2760
Rated payload				
- frontal	kg	1670	1580	1580
- swiveled	kg	1465	1380	1380
Loads according to ISO 8313				
Bulk density	t/m ³	1,65	1,0	1,8
Rated dump load				
- frontal	kg	3170	3000	3000
- swiveled	kg	2610	2460	2460
Rated payload				
- frontal	kg	1585	1500	1500
- swiveled	kg	1305	1230	1230
Tear-out force (ISO 8313)	daN	4560	3625	4405
Pushing force	kN	38,0	38,0	38,0
AA4 Max. dump angle	°	93	93	90
B Max. dumping distance				
at dump angle 45°	mm	1335	1465	1370
G Dumping height at				
max. dumping distance				
and dump angle 45°	mm	890		760
H6 Depth of feed-in	mm	60		135
H7 Distance to the bolt center				
(quick-change device)	mm	400	400	400
H8 Dumping height at				
max. lifting height				
and dump angle 45°	mm	2600	2420	2475
H9 Distance to the bolt center				
(quick-change device)	mm	3420	3420	3420
H10 Maximum working height	mm	4130		4090
J Free lift height	mm	3150	3150	3150
L6 Dumping distance				
at max. lifting height and				
dump angle 45°	mm	500	675	575
L7 Overall length	mm	5115		5150
L8 Overall length	mm	5025		5060
Angle, transport position	°	49	49	49
Multi-purpose bucket opened:				
D Max. dumping distance				
at max. lifting height and				
swivelled bucket	mm	-	-	535
HH13 Max. dumping height with				
swivelled bucket	mm	-	-	3385

NOTE

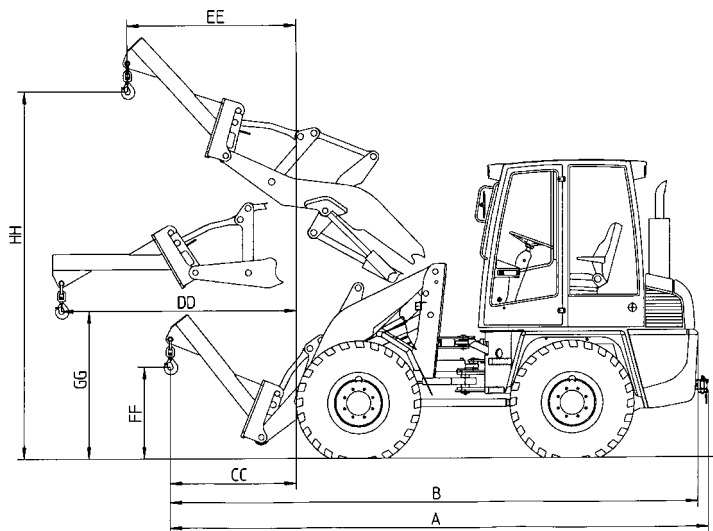
- The technical data refer to tires of size 405/70 R 20.

Bucket type:		Standard bucket	Multi-purpose bucket
Bucket volume	m ³	0,85	0,75
Bucket width	mm	2000	2000
Dead weight	kg	324	470
Loads according to DIN 24094			
Bulk density	t/m ³	1,7	1,8
Rated dump load			
- frontal	kg	3270	3060
- swiveled	kg	2860	2670
Rated payload			
- frontal	kg	1635	1530
- swiveled	kg	1430	1335
Loads according to ISO 8313			
Bulk density	t/m ³	1,5	1,6
Rated dump load			
- frontal	kg	3100	2910
- swiveled	kg	2550	2380
Rated payload			
- frontal	kg	1550	1455
- swiveled	kg	1275	1190
Tear-out force (ISO 8313)	daN		
Pushing force	kN	38,0	38,0

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
Dead weight	192 kg

Permissible payload N acc. to DIN 24094

frontal

- level terrain (stability safety factor 1.25)	2275 kg
- rough terrain (stability safety factor 1.67)	1705 kg

swiveled

- level terrain (stability safety factor 1.25)	2000 kg
- rough terrain (stability safety factor 1.67)	1500 kg

Permissible payload N acc. to ISO 8313

frontal

- level terrain (stability safety factor 1.25)	2185 kg
- rough terrain (stability safety factor 1.67)	1640 kg

swiveled

- level terrain (stability safety factor 1.25)	1825 kg
- rough terrain (stability safety factor 1.67)	1365 kg

Permissible payload N acc. to ISO 8313 (height of upper tine edge: 150 mm)

frontal

- level terrain (stability safety factor 1.25)	2775 kg
- rough terrain (stability safety factor 1.67)	2080 kg

swiveled

- level terrain (stability safety factor 1.25)	2325 kg
- rough terrain (stability safety factor 1.67)	1745 kg

A1	Total length	5455 mm
A2	Total length	5375 mm
B	Min. operating span	610 mm
C	Max. operating span	1145 mm
D	Operating span at max. lifting height	320 mm
E	Tilt angle	15°
F	Depth of feed-in	10 mm
G	Free lift height at max. reach	1475 mm
HH15	Free lift height at max. lifting height (Upper edge of tines)	3190 mm
HH16	Free lift height at max. lifting height (Lower edge of tines)	3145 mm
HH17	Height with maximum lifting height and tilted tines	2500 mm
M	Reach (height of upper tine edge: 150 mm)	690 mm
S	Distance between tire and tine point (height of upper tine edge: 150 mm)	1790 mm

3.5.3 Lifting hook

Permissible payload according to DIN EN 474-3

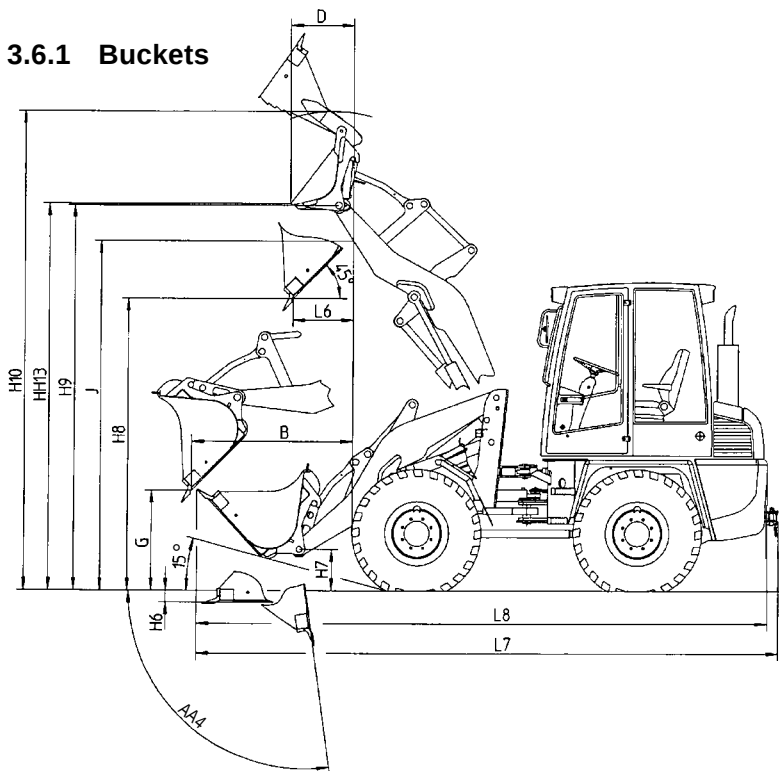
-	Max. outreach (stability safety factor 2)	850 kg
	Dead weight	145 kg
A	Total length	4895 mm
B	Total length	4815 mm
CC	Minimum reach with bucket arm in lowermost position	1145 mm
DD	Max. outreach	2150 mm
EE	Reach with bucket arm in uppermost position	965 mm
FF	Min. lifting height	890 mm
GG	Lifting height with maximum reach	1350 mm
HH	Max. lifting height	4030 mm

3.6 Attachments AL 100t

NOTE

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

3.6.1 Buckets



Bucket type

Standard bucket

Bucket volume	m ³	0,9
Bucket width	mm	1950
Dead weight	kg	306

Loads according to DIN 24094 *

Bulk density	t/m ³	2,0
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Rated dump load

- frontal	kg	4170
- swiveled	kg	3660

Rated payload

- frontal	kg	2085
- swiveled	kg	1830

Operating weight without attachment *	kg	5320
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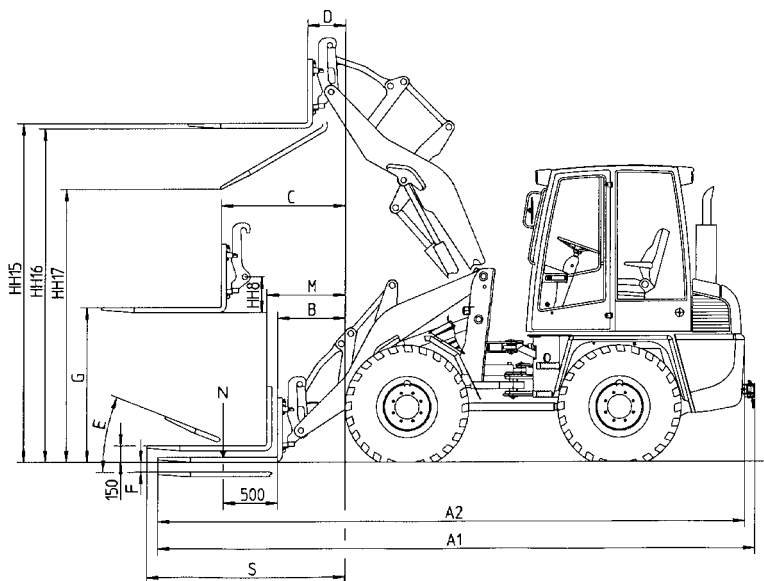
* with water in the rear axle wheels

3.6.1 Buckets

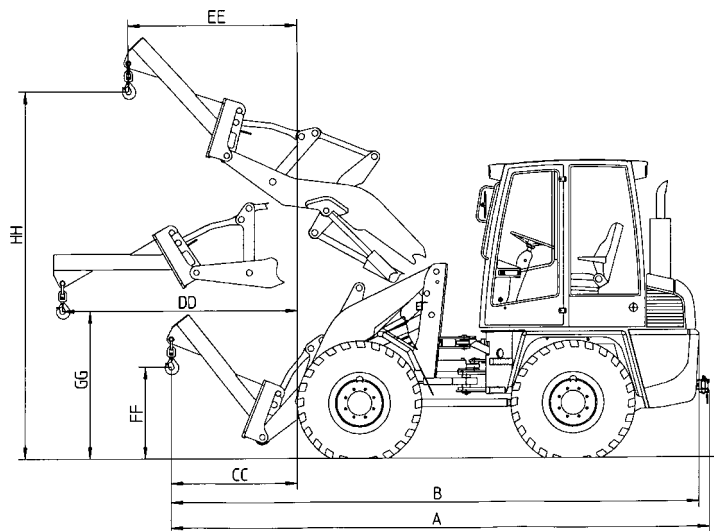
Bucket type

		<i>Standard bucket</i>	<i>Lightweight bucket</i>	<i>Multi-purpose bucket</i>
Bucket volume	m ³	0,9	1,4	0,75
Bucket width	mm	1950	2000	2000
Dead weight	kg	306	408	470
Loads according to DIN 24094				
Bulk density	t/m ³	1,9	1,15	1,9
Rated dump load				
- frontal	kg	3890	3660	3640
- swiveled	kg	3420	3200	3180
Rated payload				
- frontal	kg	1945	1830	1820
- swiveled	kg	1710	1600	1590
Loads according to ISO 8313				
Bulk density	t/m ³	1,65	1,0	1,7
Rated dump load				
- frontal	kg	3550	3340	3320
- swiveled	kg	2930	2760	2740
Rated payload				
- frontal	kg	1775	1670	1660
- swiveled	kg	1465	1380	1370
Tear-out force (ISO 8313)	daN	5390	4095	5135
Pushing force	kN	41,7	41,7	41,7
AA4 Max. dump angle	°	93	93	90
B Max. dumping distance				
at dump angle 45°	mm	1340	1520	1320
G Dumping height at				
max. dumping distance				
and dump angle 45°	mm	865		860
H6 Depth of feed-in	mm	65		105
H7 Distance to the bolt center				
(quick-change device)	mm	400	400	400
H8 Dumping height at				
max. lifting height				
and dump angle 45°	mm	2575	2360	2560
H9 Distance to the bolt center				
(quick-change device)	mm	3425	3425	3425
H10 Maximum working height	mm	4210		4115
J Free lift height	mm	3150	3150	3150
L6 Dumping distance				
at max. lifting height and				
dump angle 45°	mm	515	735	495
L7 Overall length	mm	5145		5070
L8 Overall length	mm	5055		4980
Angle, transport position	°	49	49	49
Multi-purpose bucket opened:				
D Max. dumping distance				
at max. lifting height and				
swivelled bucket	mm	-	-	530
HH13 Max. dumping height with				
swivelled bucket	mm	-	-	3390

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
Dead weight	192 kg

Permissible payload N acc. to DIN 24094 frontal

- level terrain (stability safety factor 1.25)	2670 kg
- rough terrain (stability safety factor 1.67)	2000 kg

swiveled

- level terrain (stability safety factor 1.25)	2345 kg
- rough terrain (stability safety factor 1.67)	1755 kg

Permissible payload N acc. to ISO 8313 frontal

- level terrain (stability safety factor 1.25)	2555 kg
- rough terrain (stability safety factor 1.67)	1915 kg

swiveled

- level terrain (stability safety factor 1.25)	2140 kg
- rough terrain (stability safety factor 1.67)	1605 kg

Permissible payload N acc. to ISO 8313 (height of upper tine edge: 150 mm) frontal

- level terrain (stability safety factor 1.25)	3330 kg
- rough terrain (stability safety factor 1.67)	2490 kg

swiveled

- level terrain (stability safety factor 1.25)	2715 kg
- rough terrain (stability safety factor 1.67)	2030 kg

A1	Total length	5460 mm
A2	Total length	5370 mm
B	Min. operating span	595 mm
C	Max. operating span	1135 mm
D	Operating span at max. lifting height	305 mm
E	Tilt angle	15°
F	Depth of feed-in	10 mm
G	Free lift height at max. reach	1485 mm
HH15	Free lift height at max. lifting height (Upper edge of tines)	3200 mm
HH16	Free lift height at max. lifting height (Lower edge of tines)	3155 mm
HH17	Height with maximum lifting height and tilted tines	2525 mm
M	Reach (height of upper tine edge: 150 mm)	670 mm
S	Distance between tire and tine point (height of upper tine edge: 150 mm)	1770 mm

3.6.3 Lifting hook

Permissible payload according to DIN EN 474-3

-	Max. outreach (stability safety factor 2)	1000 kg
	Dead weight	145 kg
A	Total length	4915 mm
B	Total length	4830 mm
CC	Minimum reach with bucket arm in lowermost position	1150 mm
DD	Max. outreach	2140 mm
EE	Reach with bucket arm in uppermost position	975 mm
FF	Min. lifting height	880 mm
GG	Lifting height with maximum reach	1355 mm
HH	Max. lifting height	4015 mm

3.7 AL 100ti » with industrial arm «

NOTE

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

3.7.1 Machine

- Height	2720 mm
- Width (over tires)	1790 mm
- Wheel base	1950 mm
- Track width	1440 mm
- Operating weight without attachment	4990 kg
- Ground clearance	- vehicle centre - rear axle gear
	484 mm 345 mm
- Turning radius over the rear (exterior)	3900 mm
- Articulation angle	- left - right
	40 ° 40 °
- Embankment angle	31 °
- Climbing ability with payload	60 %
- Max. lifting capacity	4500 kg

3.7.2 Engine

- Oil-/air-cooled diesel engine	
- 4 cylinders, 4-stroke, direct injection	
- Displacement	2732 cm ³
- Power according to ISO 9249	51,5 kW at 2500 rpm
- Exhaust emission regulation according to RL 97/68 EC step 1 + EPA nonroad TIER 1	

3.7.3 Starter

-	2.2 kW, 12 V
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3.7.4 Alternator

-	60 A, 14 V
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3.7.5 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

3.7.6 Axle loads

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

3.7.7 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
- Size 405/70 R 20
 - Pressure
 - front 3,0 bar
 - rear 2,5-3,0 bar
- Size 14,5 - 20
 - Pressure
 - front 3,0 bar
 - rear 2,5-3,0 bar

3.7.8 Steering system

- Hydrostatically via priority valve
- Pressure max. 180 bar

3.7.9 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.

3.7.10 Electrical system

- Battery 88 Ah

3.7.11 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

3.7.12 Fuel supply system

- Contents	
fuel tank	70 l

3.7.13 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

3.7.14 Return-flow suction filter

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

3.7.15 Electrical contamination indicator

- Activation pressure	$p = 2 \text{ bar}$
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3.7.16 Oil cooler with temperature-controlled fan

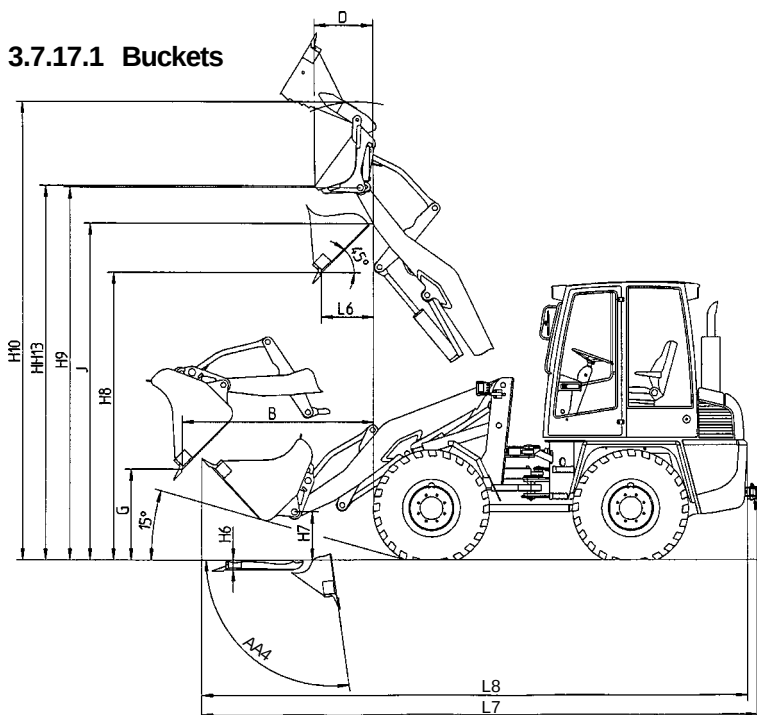
- Power	max. 15 kW
- Flow rate	25 l/min

3.7.17 Attachments AL 100ti

NOTE

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

3.7.17.1 Buckets



Bucket type

Standard bucket

Bucket volume	m ³	0,8
Bucket width	mm	1850
Dead weight	kg	283

Loads according to DIN 24094 *

Bulk density	t/m ³	2,0
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Rated dump load

- frontal	kg	3770
- swiveled	kg	3310

Rated payload

- frontal	kg	1885
- swiveled	kg	1655

Operating weight without attachment *	kg	5250
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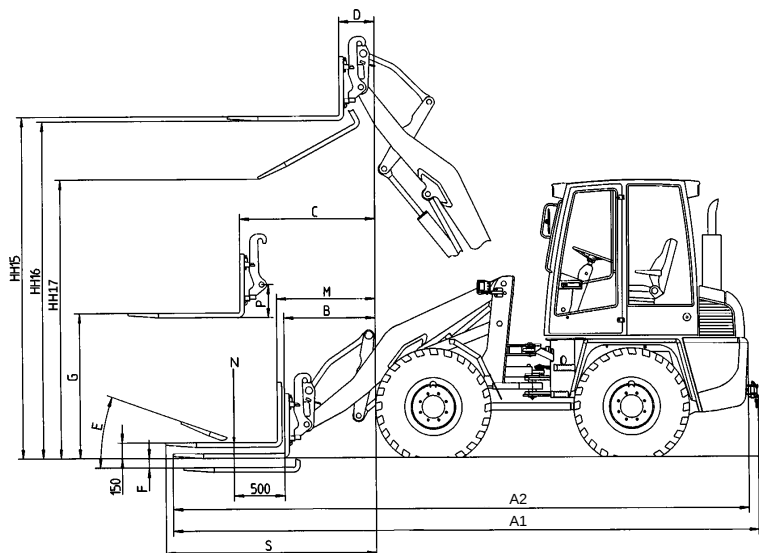
* with water in the rear axle wheels

3.7.17.1 Buckets

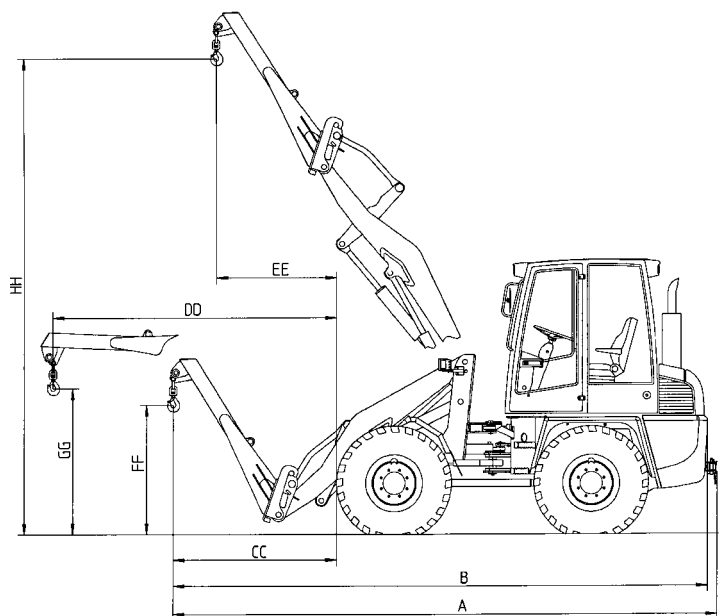
Bucket type

		<i>Standard bucket</i>	<i>Lightweight bucket</i>	<i>Multi-purpose bucket</i>
Bucket volume	m ³	0,8	1,2	0,65
Bucket width	mm	1850	2000	1850
Dead weight	kg	283	378	430
Loads according to DIN 24094				
Bulk density	t/m ³	1,95	1,2	2,0
Rated dump load				
- frontal	kg	3520	3320	3320
- swiveled	kg	3090	2900	2900
Rated payload				
- frontal	kg	1760	1660	1660
- swiveled	kg	1545	1450	1450
Loads according to ISO 8313				
Bulk density	t/m ³	1,8	1,0	1,8
Rated dump load				
- frontal	kg	3400	3220	3220
- swiveled	kg	2680	2520	2520
Rated payload				
- frontal	kg	1700	1610	1610
- swiveled	kg	1340	1260	1260
Tear-out force (ISO 8313)	daN	5200	4150	5200
Pushing force	kN	41,7	41,7	41,7
AA4 Max. dump angle	°	90	90	89
B Max. dumping distance				
at dump angle 45°	mm	1500	1675	1545
G Dumping height at				
max. dumping distance				
and dump angle 45°	mm	890		770
H6 Depth of feed-in	mm	40		110
H7 Distance to the bolt center				
(quick-change device)	mm	440	440	440
H8 Dumping height at				
max. lifting height				
and dump angle 45°	mm	2875	2665	2770
H9 Distance to the bolt center				
(quick-change device)	mm	3670	3670	3670
H10 Maximum working height	mm	4400		4365
J Free lift height	mm	3380	3380	3380
L6 Dumping distance				
at max. lifting height and				
dump angle 45°	mm	535	685	595
L7 Overall length	mm	5425		5360
L8 Overall length	mm	5335		5270
Angle, transport position	°	50	50	50
Multi-purpose bucket opened:				
D Max. dumping distance				
at max. lifting height and				
swivelled bucket	mm	-	-	485
HH13 Max. dumping height with				
swivelled bucket	mm	-	-	3680

3.7.17.2 Fork-liftattachment



3.7.17.3 Lifting hook



3.7.17.2 Fork-lift attachment

Fork length	1100 mm
Fork height	45 mm
Fork spacing (centre - centre)	
- min.	216 mm
- max.	1054 mm
Dead weight	192 kg

Permissible payload N acc. to DIN 24094 frontal

- level terrain (stability safety factor 1.25)	2410 kg
- rough terrain (stability safety factor 1.67)	1805 kg

swiveled

- level terrain (stability safety factor 1.25)	2115 kg
- rough terrain (stability safety factor 1.67)	1585 kg

Permissible payload N acc. to ISO 8313 frontal

- level terrain (stability safety factor 1.25)	2340 kg
- rough terrain (stability safety factor 1.67)	1755 kg

swiveled

- level terrain (stability safety factor 1.25)	1880 kg
- rough terrain (stability safety factor 1.67)	1410 kg

Permissible payload N acc. to ISO 8313 (height of upper tine edge: 150 mm) frontal

- level terrain (stability safety factor 1.25)	2880 kg
- rough terrain (stability safety factor 1.67)	2160 kg

swiveled

- level terrain (stability safety factor 1.25)	2280 kg
- rough terrain (stability safety factor 1.67)	1710 kg

A1	Total length (comprising shunting and towing coupling)	5700 mm
A2	Total length	5610 mm
B	Min. operating span	835 mm
C	Max. operating span	1320 mm
D	Operating span at max. lifting height	265 mm
E	Tilt angle	21 °
F	Depth of feed-in	10 mm
G	Free lift height at max. reach	1485 mm
HH15	Free lift height at max. lifting height (Upper edge of tines)	3455 mm
HH16	Free lift height at max. lifting height (Lower edge of tines)	3410 mm
HH17	Height with maximum lifting height and tilted tines	2770 mm
M	Reach (height of upper tine edge: 150 mm)	900 mm
S	Distance between tire and tine point (height of upper tine edge: 150 mm)	2000 mm

3.7.17.3 Lifting hook

Permissible payload according to DIN EN 474-3

- Max. outreach (stability safety factor 2)	1000 kg
Dead weight	145 kg

A	Total length (comprising shunting and towing coupling)	5190 mm
B	Total length	5100 mm
CC	Minimum reach with bucket arm in lowermost position	1410 mm
DD	Max. outreach	2310 mm
EE	Reach with bucket arm in uppermost position	865 mm
FF	Min. lifting height	880 mm
GG	Lifting height with maximum reach	1360 mm
HH	Max. lifting height	4330 mm