

# AHLMANN

SYSTEM 180

AS 90



> The loader specialist

> Swing Shovel Loader 0.9 – 1.4 m<sup>3</sup>

AS 90

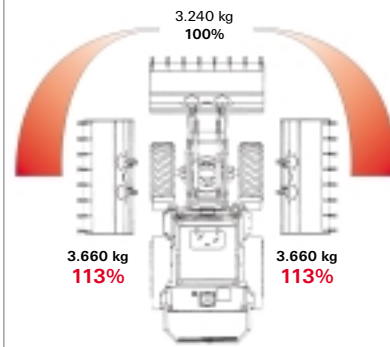
Let's have a look

53.5 kW / 73 hp  
at 2500 min<sup>-1</sup>

max. payload on  
forks: 2,550 kg

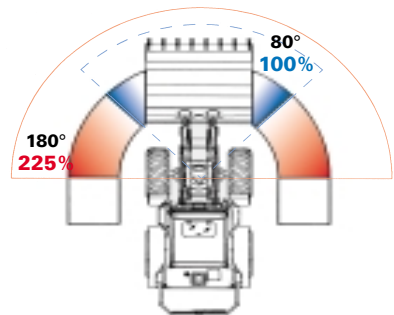
maximum swing  
of 180° (2 x 90°)  
with all attach-  
ments with even  
higher tipping  
load in swivelled  
position!

Tipping loads with standard bucket



Tipping load acc. to ISO 14397 (AS 90)

Working area with 4-in-1 bucket



Working area swing shovel loader  
△ 125% advantage  
Working area articulated loader

Powerful Double-Z-Kinematics with  
precise parallel lifting and final position  
cushioning of the lift cylinders



Left foot operated swing pedal  
avoids tiredness

Low-maintenance, play-free chain  
operated swinging system with  
constant turning speed and -power

Self-engaging, automatic  
differential in front axle  
(locking factor 45%)

Hydraulically  
operated quick coupler

Wide range of  
attachments

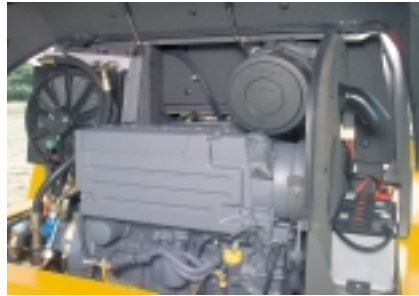


# AS 90

at your advantages



Safe, easy access on both sides



Easy access to all service points



Most spacious operator cabin in its class



Rigid single-component chassis for maximum stability

High performance Deutz turbo diesel engine

Hydrostatic four-wheel steering

Payload dependent axle support

Low-maintenance wet lamella brake

## AS 90

Manoeuvrable and compact



Ahlmann swing shovel loaders are not only compact, flexible, comfortable, secure and extremely efficient. Due to their effectiveness thanks to their innovative swing concept, they have kept and still keep the position of the market leader:

- Short, fast operating cycles for time-saving
- Excellent manoeuvrability particularly in confined areas
- Working in one track and shorter travel distance for minimal traffic obstruction
- Reduced soil compaction due to less operating cycles.



## AS 90

Low-maintenance and economical



Various operations, easy to maintain and long-lasting components guarantee high profitability and are the brand character of Ahlmann swing shovel loaders:

- Additional operations possible without stabilisers even in confined spaces as a forklift truck, excavator or when equipped with a materials handling hook
- Extensive range of attachments for almost every application
- Western European technical components
- Optimal access to all service points
- Long maintenance intervals at low maintenance costs
- The play-free chain operated swinging system functions without maintenance or wear and tear throughout the working life of the machine.



## AS 90

## Technical Data

Operating weight: 6,130 kg  
 Engine power: 53.5 kW (73 hp)  
 Standard bucket: 0.90 m<sup>3</sup>



## Engine

Oil/air-cooled Deutz turbo diesel engine  
 4 cylinder turbo (emissions acc. to EU 97/68 step II), 4-stroke, direct fuel injection  
 Type BF 4L 2011  
 Net power at 2500 min<sup>-1</sup>  
 acc. to ISO 9249 (73 hp) 53.5 kW  
 Max. torque at 1650 min<sup>-1</sup>  
 acc. to ISO 9249 241 Nm  
 spec. fuel consumption at max. torque: 220 g/kWh

Air intake filter: 2 level dry-air filter with safety cartridge

Electrical system: Operating voltage: 12 Volt  
 Battery capacity: 88 Ah  
 Alternator rating: 60 A 840 Watt  
 Starter rating: (3.0 hp) 2.2 kW

## Drive

Hydrostatic drive with automotive control, 2 stages for maximum propulsive force, gear-engage under load, multifunctional lever (joystick) for drive and working hydraulics control

Axles: planetary axles with four-wheel steering for maximum flexibility, oscillating rear axle  
 Differential lock: self-engaging, automatic differential lock in front axle  
 Locking factor 45%  
 Wheels: tire size: 14,5-20  
 optionally: 405/70 R20  
 Speeds: Road gear: 0-20 km/h  
 (optionally 30 or 40 km/h)  
 Field gear: 0-6 km/h  
 Gradability: under load 60%  
 Oscillation: max. oscillation angle +/- 10°

## Brakes

Working brakes:  
 1. hydraulically operated, oil-immersed multiple disc brake on front axle, acting on all 4 wheels  
 2. hydrostatic inching brake, acting on all 4 wheels

Parking brake:  
 Spring actuated oil-immersed multiple disk brake on front axle, acting on all 4 wheels

## Steering

Hydrostatic steering  
 max. steering angle +/- 33°  
 Turning radius measured over rear end R = 3615 mm

- Comfortable driver's cabin with ROPS safety system
- Joystick controls
- Servo-assisted working hydraulics
- High-performance, power-controlled, hydrostatic four-wheel drive
- Four-wheel steering

- Planetary axles with self-locking differential on front
- Oil-immersed multiple disc brakes
- Double-Z-Kinematics with precise parallel lifting
- Hydraulically controlled quick-coupler
- Wide range of attachments

## Hydraulic system

1. Working hydraulics circuit (lift/lower, tilt, accessories), and steering (via priority valve); three-way control valve with primary and secondary safeguards  
 Max. operating pressure at 2500 min<sup>-1</sup>: 82.5 l/min and 200 bar  
 2. Cylinder (swivel) single control valve with primary and secondary safeguards  
 Max. operating pressure at 2500 min<sup>-1</sup>: 35 l/min and 200 bar  
 Servo-assisted hydraulic controls for 1st circuit, joystick operated  
 Float position for lifting cylinder  
 Cylinder: 2 lifting cylinders 90 ø  
 1 tilting cylinder 100 ø  
 2 swing cylinders 100 ø  
 Cycle-times: Lift (under load) 5.8 s  
 Lower (w/o load) 3.5 s  
 Crowd time (90°) 1.5 s  
 Dump time (45°) 2.0 s  
 Swivel time (90°) 3.5 s

## Performance data

Digging depth with standard bucket: 70 mm  
 Bucket position: Crowd angle 44°  
 Dump angle top 45°  
 Dump angle max. 105°  
 Lifting force: 4,000 daN  
 Breakout force: 4,550 daN  
 Thrust force: 4,280 daN

**Tipping load:**  
 Standard bucket, max. turned, straight 3,240 kg  
 Standard bucket, max. turned, 90°-swivelled 3,660 kg

**Payload:**  
 on forks, max. turned, frontal, even terrain 2,300 kg  
 on forks, max. turned, max. swivelled, even terrain 2,350 kg  
 on forks, max. turned, frontal, even terrain\* 2,550 kg  
 on forks, max. turned, frontal, uneven terrain\* 1,910 kg

according to ISO 14397  
 \* Transport position 150 mm above ground acc. to ISO 14397 (ISO 8313) with safety margin

## Chassis

Rigid single-component chassis for maximum stability specially with swivelled bucket attachment. Quality steel construction, robot welded. Sealed articulated/oscillated pivot for long lifetime. Milled seatings for axles and rotating assembly. Double-Z-Kinematics allow exact parallel adjustment, optimized for use with palette forks. Operator's cab with flexible four-point mountings for maximum driver comfort and minimum noise levels. Smooth power-assisted and accurate joystick controls.

## Filling capacities

Engine with filter	approx.	10,5 l
Fuel tank	approx.	75,0 l
Front axle total	approx.	4,0 l
Rear axle with gearbox	approx.	6,0 l
Hydraulic system with tank	approx.	130,0 l

## Standard features

Comfortable operator's cabin with ROPS safety feature and 2 lockable doors allowing access from both sides of vehicle, doors open through 180° with safety restraint on machine, tinted windows, electrical wipers front and rear, front and rear screen washers, 2 external rear-view mirrors, tinted sun-roof, adjustable steering column and multi-functional lever (joystick), multiply adjustable driver's seat, adjusts to driver's weight, hydraulic suspension, safety belt, sun-blinds, heater and fresh air system with external filter, interior lighting, glove-boxes, intuitive modular cockpit with symbolic display components and monitoring LEDs, 12v power outlet, 2 driving lights at front of vehicle roof, 2 working lights mounted on frame of bucket arm, 2 working lights mounted on rear of cab, reversing lights, indicators, rear and brake lights, electrically locking hydraulically operated quick-coupler, towing coupling, fastening and lifting points, auxiliary hydraulics 1st circuit. Color scheme: yellow, operator's cabin, axles and wheels grey

## Optional equipment

30 or 40 km/h version, tires 405/70 R20, 360° warning light, internal rear-view mirror, reverse warning system, FOPS protecting roof, bucket protection compliant to road-safety standards, auxiliary hydraulics 2nd circuit, pipe-burst protection system, boom suspension, biodegradable oil fill for hydraulic system, radio, lift delimiter, pressureless return line, lockable differential on rear axle, air-conditioning system, immobilizer, working platform, towing device, refer to list for attachments such as pallet forks, load hook, excavator, grab, hydraulic breaker etc.

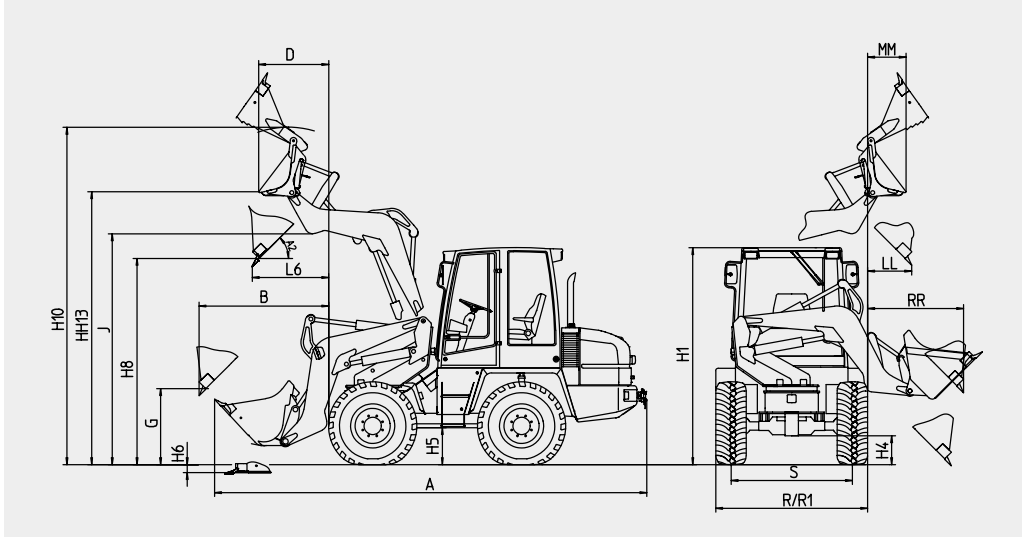
## Weight

Machine with quick-coupler and 0.9 m <sup>3</sup> -standard bucket with teeth	6,130 kg
permissible axle load front	4,500 kg
permissible axle load rear	4,500 kg

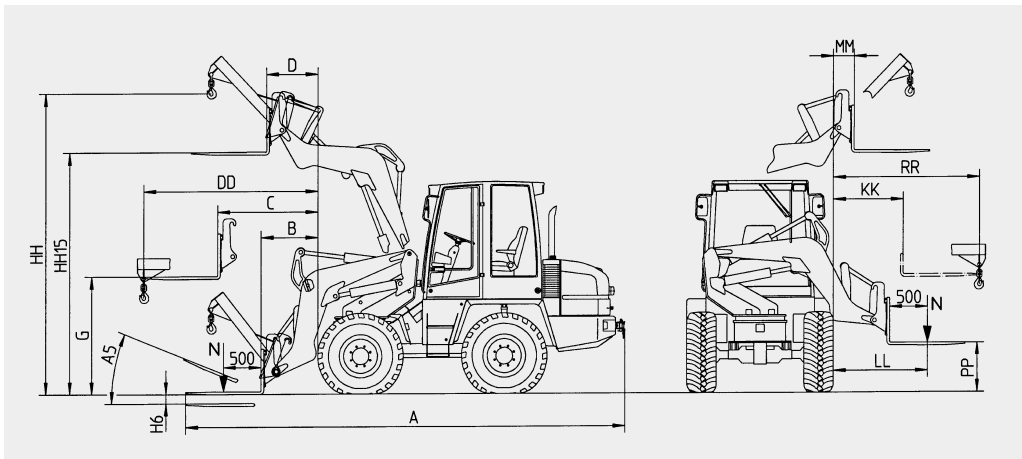
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## Technical Data

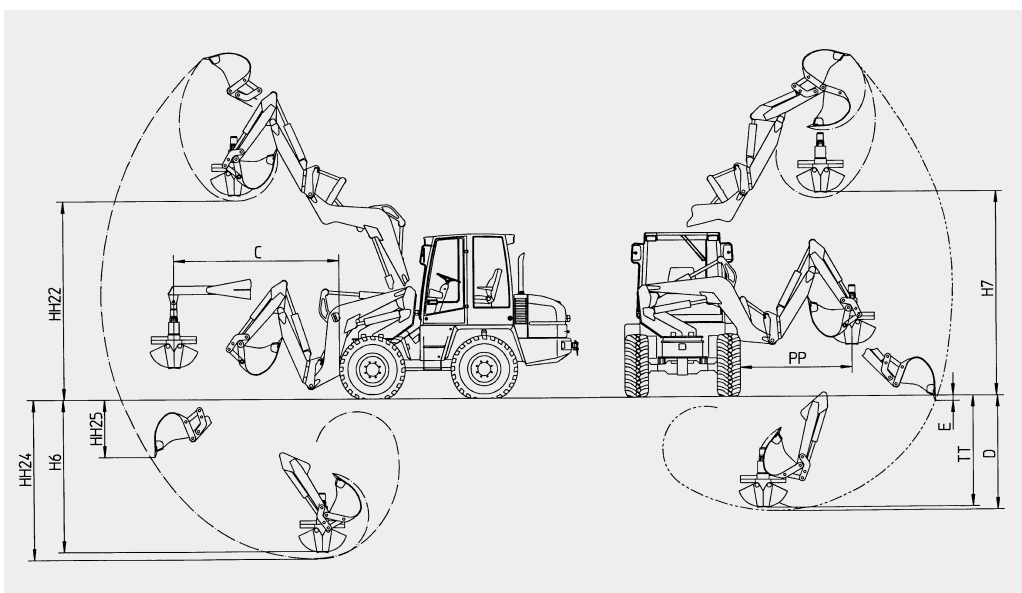
### Measurements



	Buckets	
	Standard 0.90m <sup>3</sup>	4-in-1 0.8m <sup>3</sup>
A	5695	5665
A2	45°	45°
B	1500	1585
D		900
G	1075	995
H1	2785	2785
H4	395	395
H5	500	500
H6	70	45
H8	2675	2635
H10	4395	4205
HH13		3495
J	2965	2965
LL	385	465
L6	870	950
MM		420
RR	1065	1135
S	1680	1680
R	2100	2100
R1	2030	2030



	Load hook	Forks
A	5950	6055
A5		20°
B		900
C		1350
D		660
DD	2820	
G		1425
HH	4125	
H6		145
HH15		3075
KK		900
LL		1240
MM		245
PP		625
RR	2380	



	Excavator	Grab
C		2830
D	2020	
E	100	
H6		2680
H7		3140
HH22	3330	
HH24	2660	
HH25	930	
PP		2030
TT		1980

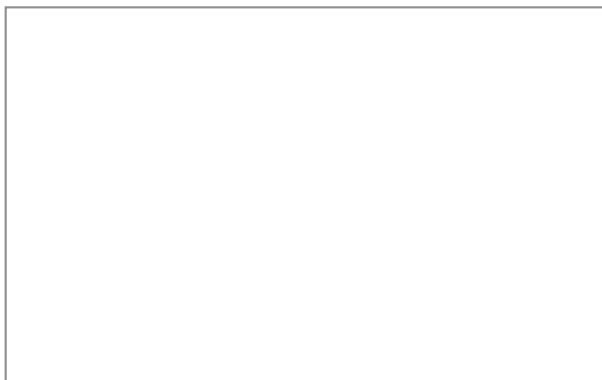
All data based on standard tyres.  
 Technical data are non-committal and are subject to constructional modifications!



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