

# AR 105<sup>e</sup>

**Operation weight:**  
9,450 kg

**Power:**  
105 kW (141 HP)

**Shovel capacity:**  
1.6 - 2.0 m<sup>3</sup>



 **Weycor**  
BY ATLAS WEYHAUSEN

# AR105<sup>e</sup>



## SMALL e. BIG EFFECT.

weycor wheel loaders are more than the sum of their parts. They reflect true passion, a fascination with technology and 'Made in Germany' quality.

It's thanks to the innovative spirit of our people, their dedication to detail and their passion for powerful engine technology that this new **e-generation of wheel loaders** has been developed.

The small '**e**' stands for

- emission reduction: Keeps the required NOx and PM limits in accordance with the most stringent emission regulations
- efficient: higher power, lower consumption
- evolutionary: advanced designs that are optimised down to the smallest detail



# WEYCOR: POWERFUL, PRECISE, RELIABLE.



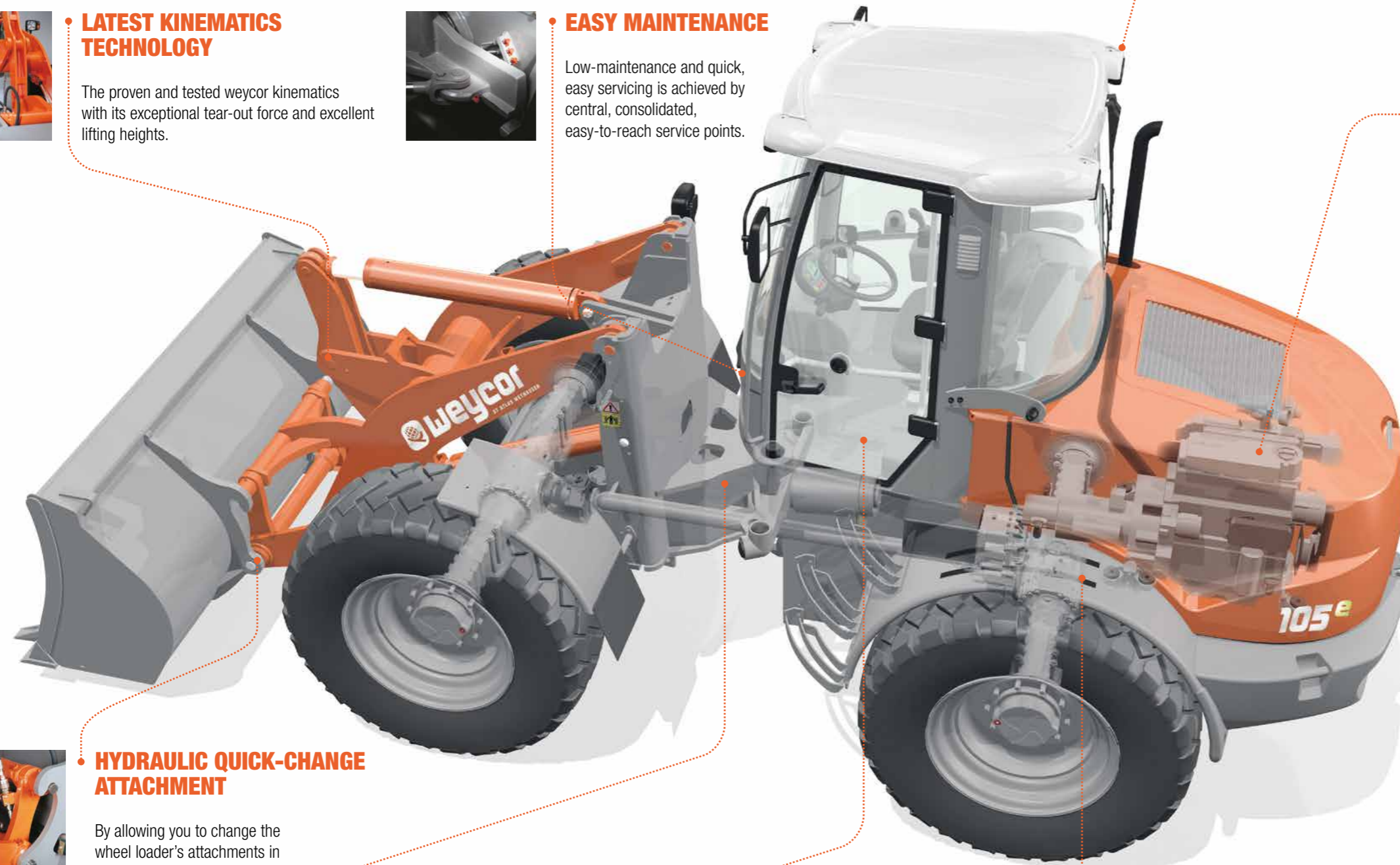
## LATEST KINEMATICS TECHNOLOGY

The proven and tested weycor kinematics with its exceptional tear-out force and excellent lifting heights.



## EASY MAINTENANCE

Low-maintenance and quick, easy servicing is achieved by central, consolidated, easy-to-reach service points.



## HYDRAULIC QUICK-CHANGE ATTACHMENT

By allowing you to change the wheel loader's attachments in a few seconds, it turns the vehicle into an all-rounder.



## ARTICULATED PENDULUM JOINT

Provides for excellent maneuverability and crosscountry mobility. Even on challenging terrain, the low center of gravity ensures exceptional stability.



## SEPARATE INCHING PEDAL

Less wear & tear and fuel consumption: In contrast to the conventional combined brake/inching pedal, with the separate inching pedal, the risk of inadvertently activating the main brake while you drive is eliminated.



## NEGATIVE BRAKE

Serves to maintain a stable position while the wheel loader is driven on slopes with the brake or inching function activated. All four wheels are automatically blocked as soon as the engine is stopped.

## COMFORTABLE CABIN

In addition to the excellent circumferential visibility in the wheel loader, its clearly arranged controls and its ergonomic design.

## POWERFUL DRIVE UNIT

weycor wheel loaders are equipped with state-of-the-art engines which combine high power reserves for challenging operations with up-to-date low emission values.



## DEUTZ ENGINE TECHNOLOGY

### TCD 4.1 L4

Water cooled 4-cylinder inline engine with turbocharging, charge air cooling and cooled external exhaust gas recirculation. Engine and exhaust aftertreatment (EAT) are adapted to an optimum efficiency of the total system and therefore ensure minimum fuel and total running costs. The engines have a modular exhaust aftertreatment system (EAT). The powerful DEUTZ Common Rail (DCR<sup>®</sup>) injection system and the electronic engine control (EMR 4) with intelligent link to the drive management ensure optimum engine performance at low fuel consumption. The engines meet the requirements of the EU Stage IIIB and US EPA TIER 4 interim with DVERT<sup>®</sup> particulate filter (DPF). In the version of TIER 4 final additionally equipped with SCR. The regeneration of the particulate filter by heat-mode during operation has no affect to the engine performance. A necessary active non-operating regeneration can only be initiated by the driver.

# AR105<sup>e</sup>

## TECHNICAL DATA

### ENGINE

|                          |                            |
|--------------------------|----------------------------|
| <b>Make</b> .....        | Deutz Diesel engine        |
|                          | TCD 4.1 L4                 |
| <b>Type</b> .....        | water cooled               |
| <b>Power***</b> .....    | 105 kW (141 HP)            |
|                          | at 2,200 min <sup>-1</sup> |
| <b>Max. torque</b> ..... | 550 Nm                     |
|                          | at 1,600 min <sup>-1</sup> |
| <b>Stroke</b> .....      | 4,040 cm <sup>3</sup>      |
| <b>Cylinders</b> .....   | 4 in Reihe                 |

### ELECTRICAL SYSTEM

|                                |               |
|--------------------------------|---------------|
| <b>Operating voltage</b> ..... | 12 V          |
| <b>Battery</b> .....           | 12 V / 100 Ah |
| <b>Alternator</b> .....        | 14 V / 95 A   |
| <b>Starter</b> .....           | 12 V / 4 kW   |

### DRIVE

- Output-regulated hydrostatic drive with pressure cut off and closed circuit acting on all 4 wheels
- Speed with standard tires: Operating speed range 0-6 km/h Road speed range 0-20 km/h Optional high speed 40 km/h (upon request)
- 1st and 2nd hydraulic gear can be engaged under load, forward/backward travel also
- Forward/backward travel, speed ranges and off-position operational via weycor joystick
- Drive operated by accelerator and separate inching pedal for best distribution of the hydraulic power for thrust and lifting forces

### BRAKES

**Standard brake:** Multi-disc brake in oil bath acting on all 4 wheels. Supplementary brake functions via inching pedal and hydrostatic drive acting on all 4 wheels.

**Parking brake:** Parking brake as spring-loaded brake acting on all 4 wheels. In case of standstill of engine the spring-loaded brake is automatically re-activated.

### AXLES

Rigid axles with planetary reduction gears in wheel hubs, connecting electrically 100%-differential lock in front and rear axle.

### STEERING

- Fully hydraulic center pivot steering
- Front and rear wheels follow the same track
- Steering angle of 40° to each side, ±12° angular movement at rear of vehicle
- Operating pressure of steering hydraulics 175 bar
- Emergency steering function

### TIRES

**Standard:** 17.5-25 EM – Construction machine tires for relatively soft surface with high traction and good self-cleaning

Special tires upon request

### HYDRAULIC SYSTEM

- Variable pump for loading and steering hydraulics
- Priority valve favoring steering hydraulics
- 3rd hydraulic section serial
- Loading hydraulic hydraulically pre-activated by weycor joystick, including float position
- Operating pressure 250 bar, Delivery of pump 138.6 l/min

### LOADING EQUIPMENT

- Powerful and solid Z-kinematics with high tear out force
- Hydraulic quick change device
- Activation of all functions by weycor joystick
- Parallel movement while using pallet forks
- Automatic shovel return to excavation position
- Automatic center position
- Locking device acc. to German StVZO for road travel

**Lifting 5.9 s**  
**Lowering 4.0 s**  
**Tipping 1.6 s**

### FUEL/OIL CAPACITIES

|                     |           |
|---------------------|-----------|
| Diesel.....         | 120 Liter |
| Hydraulic oil.....  | 106 Liter |
| Engine oil .....    | 16 Liter  |
| Front axle .....    | 7.2 Liter |
| Rear axle .....     | 7.2 Liter |
| Gear oil .....      | 1.8 Liter |
| Cooling liquid..... | 23 Liter  |

## STANDARD EQUIPMENT

### INCLUSIVE

- weycor diagnostic system (ADS) for monitoring engine parameters with integrated electronic anti-theft device
- Rear driving mirrors, foldable
- Heatable rear screen
- Comfortable access to cab from both sides
- Activation of all functions by weycor joystick
- Control lights for speed range, forward/backward travel
- Lights acc. to German StVZO for road travel
- Individually adjustable driver's seat with adjustable right arm rest
- Engine water heating with heat exchange and 4-stage fan
- Front windscreen ventilation, variable output
- Sound absorbing ROPS cab
- Working lights front and rear
- Windscreen wipe and wash unit in front and rear
- Sun visor, coat hook, ceiling lamp, stow facility
- Adjustable steering column
- Heat protection glazing with large tinted screens
- Control lights for engine oil pressure, overheating, hydraulic oil temperature, battery power, parking brake and air filter
- Central dashboard with indicators for preheating, engine temperature, fuel, working hour meter

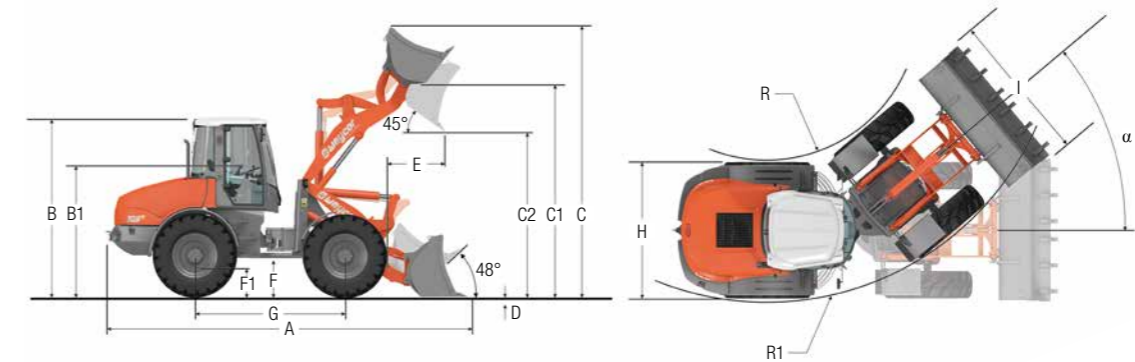
## OPTIONS

### TECHNICAL OPTIONS

- Stability damping system
- High speed version
- Trailer coupling
- Main battery switch
- Corrosion prevention against salt
- Special paintings and oils
- Joystick with integrated proportional steering for 3rd section
- Warning beacon
- Anti-theft-device with code stick
- Heatable and air cushioned seats
- Air conditioning, auxiliary heating
- Radio
- Doors with sliding windows, left and right side

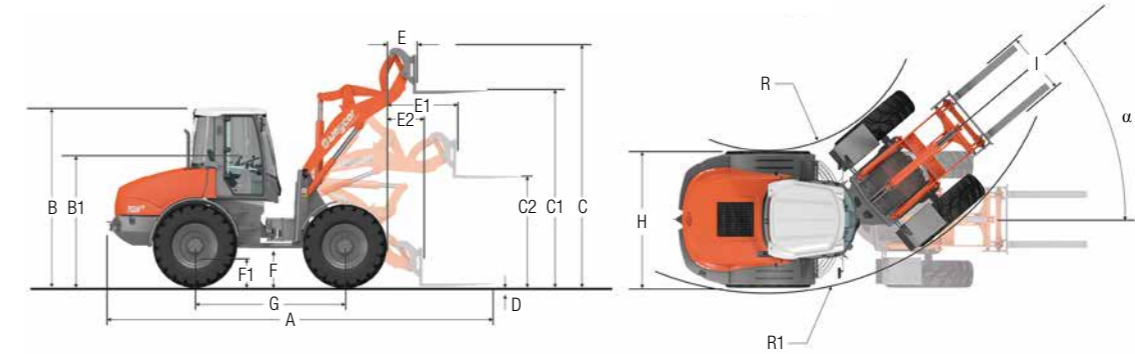
More options upon request

## TECHNICAL DATA AR 105e WITH STANDARD SHOVEL



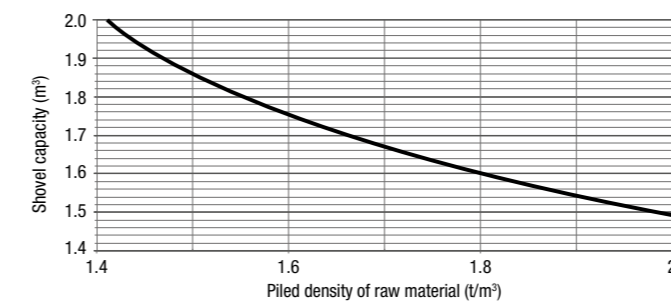
|    |          |
|----|----------|
| A  | 6,405 mm |
| B  | 2,990 mm |
| B1 | 2,205 mm |
| C  | 4,880 mm |
| C1 | 3,810 mm |
| C2 | 2,930 mm |
| D  | 65 mm    |
| E  | 940 mm   |
| F  | 570 mm   |
| F1 | 410 mm   |
| G  | 2,650 mm |
| H  | 2,225 mm |
| I  | 2,300 mm |
| R  | 2,540 mm |
| R1 | 4,850 mm |
| α  | 40°      |

## TECHNICAL DATA AR 105e WITH PALLET FORKS



|    |          |
|----|----------|
| A  | 6,780 mm |
| B  | 2,990 mm |
| B1 | 2,205 mm |
| C  | 4,200 mm |
| C1 | 3,600 mm |
| C2 | 1,700 mm |
| D  | 50 mm    |
| E  | 490 mm   |
| E1 | 1,320 mm |
| E2 | 660 mm   |
| F  | 570 mm   |
| F1 | 410 mm   |
| G  | 2,650 mm |
| H  | 2,225 mm |
| I  | 1,400 mm |
| R  | 2,540 mm |
| R1 | 4,850 mm |
| α  | 40°      |

## DIAGRAM FOR SHOVEL SELECTION



## SPECIFIC GRAVITY FOR MATERIAL HANDLING WEIGHT (t/m³)

| Construction              | Industry                        |                              |
|---------------------------|---------------------------------|------------------------------|
| concrete.....1.9          | ember.....0.7                   | phosphate fertiliser.....2.2 |
| soil (dry).....1.5        | brown coal briquette.....0.8    | turf (watery).....1.1        |
| soil (watery).....2.0     | ferrous product.....7.8         | turf (dry).....0.4           |
| rock (fill).....2.4       | iron ore.....2.3                | mineral fertilizer.....1.0   |
| granite.....1.8           | cullet.....1.9                  |                              |
| limestone.....1.6         | gas coke.....0.4                |                              |
| gravel (dry).....1.9      | timber.....0.8                  |                              |
| gravel (watery).....2.1   | mineral coal.....1.2            |                              |
| loam.....1.7              | paper.....0.9                   |                              |
| plaster.....2.2           | slag.....1.0                    |                              |
| sand (dry).....1.9        | slag concrete.....2.7           |                              |
| sand (watery).....2.1     |                                 |                              |
| sandstone.....2.4         | <b>Landscaping, Agriculture</b> |                              |
| shale.....2.2             | agricultural crop.....0.7       |                              |
| sediment.....2.1          | grain.....0.6                   |                              |
| crushed stone.....1.5     | hay.....0.3                     |                              |
| de-icing salt.....1.3     | potash.....1.1                  |                              |
| clay.....1.6              | compost.....1.0                 |                              |
| cement.....1.7            | flour.....0.5                   |                              |
| clinker (stacked).....1.8 | clay (watery).....2.3           |                              |

## OPERATING DATA

|                                    |                    |
|------------------------------------|--------------------|
| Shovel capacity acc. to SAE        | 1.6 m <sup>3</sup> |
| Track width                        | 1,780 mm           |
| Turning radius (outer shovel edge) | 5,250 mm           |
| Tear out force                     | 7,000 daN          |
| Torque                             | 6,300 daN          |
| Tipping load, straight             | 7,330 kg           |
| Tipping load, articulated          | 6,490 kg           |
| Lifting capacity at ground level   | 8,200 daN          |
| Service weight                     | 9,450 kg           |

Differing data for use of pallet forks (500 mm distance to center of gravity)\*

|   |           |
|---|-----------|
| Static tipping load, straight and articulated | 5,260 kg  |
| Lifting capacity                              | 6,800 daN |
| Payload 80% even surface**                    | 4,208 kg  |
| Payload 60% uneven surface***                 | 3,156 kg  |

### Sound level

|   |                            |
|---|----------------------------|
| Average acoustic power-level L <sub>WA</sub> <sup>(1)</sup>         | 102.0 dB(A)                |
| Guaranteed acoustic power-level L <sub>WA</sub> <sup>(2)</sup>      | 103.0 dB(A)                |
| Sound pressure level L <sub>pA</sub> <sup>(3)</sup>                 | 79.0 dB(A)                 |
| Specific vibration-data Hand- / arm- / bodyvibration <sup>(4)</sup> | < 2.5/0.5 m/s <sup>2</sup> |

\* Travel with load only permitted close to the ground.  
\*\* According to ISO 8313 and EN 474-3. \*\*\* According to ISO 14396, EU RL97/68/EC. (1) According to 2000/14/EG & appendices. (2) According to 2000/14/EG & appendices. (3) According to ISO 6396. (4) According to ISO 8041.



You can find our current product range and more exciting details at: **[www.products.weycor.de](http://www.products.weycor.de)**

Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice, errors expected. The technical data refer only to the standard version, illustrations do not necessarily show the standard version of the machine. Not all products are available in all markets.

weycor is a brand of ATLAS WEYHAUSEN GMBH.

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 **weycor**  
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