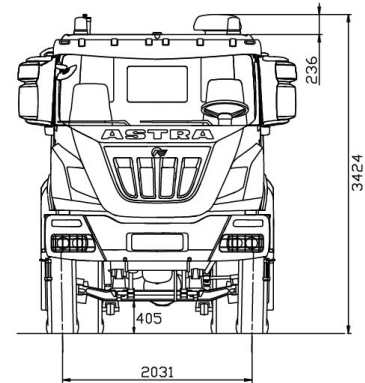
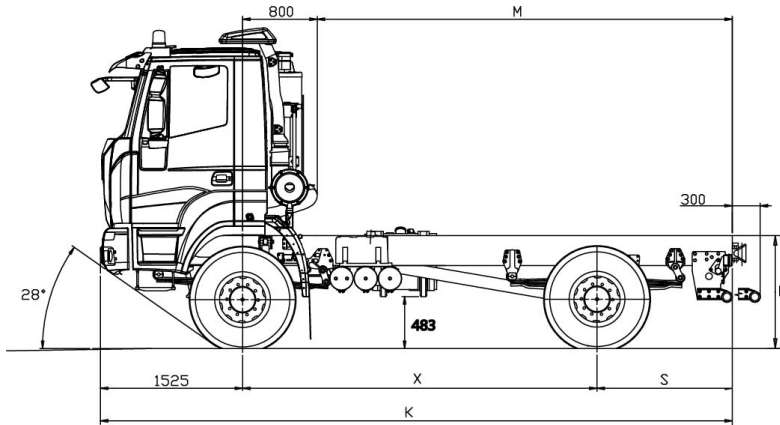



**chassis 4x2  
HD42.38**

**DIMENSIONS (MM)**

| X    | K    | M max(*) | S    | H        |        | TURNING DIAMETER<br>(wall to wall) |
|------|------|----------|------|----------|--------|------------------------------------|
|      |      |          |      | unloaded | loaded |                                    |
| 3800 | 6775 | 4450     | 1450 | 1178     | 1134   | 15500                              |
| 4200 | 7575 | 5250     | 1850 | 1178     | 1134   | 16700                              |
| 4600 | 8375 | 6050     | 2250 | 1178     | 1134   | 18000                              |
| 5100 | 8875 | 6550     | 2250 | 1178     | 1134   | 19500                              |

(\*) M max.: indicative value to be confirmed by bodybuilder.  
(Tyres 315/80R22.5)

**WEIGHTS (KG)**

| X    | Distribution net weight(*) |            |            | Max technical weight |            |                      |                          |
|------|----------------------------|------------|------------|----------------------|------------|----------------------|--------------------------|
|      | First axle                 | Rear axles | Net Weight | First axle           | Rear axles | Gross Vehicle Weight | Gross Combination Weight |
| 3800 | 4920                       | 2360       | 7280       | 8000<br>9000 (1)     | 13000      | 21000                | 55000                    |
| 4200 | 4915                       | 2415       | 7330       |                      |            |                      |                          |
| 4600 | 4925                       | 2490       | 7415       |                      |            |                      |                          |
| 5100 | 4960                       | 2510       | 7470       |                      |            |                      |                          |

(\*) Net weight including driver with tanks filled to at least 90%, equipped with standard equipment according to the manufacturer's specifications and, if fitted, the mass of the bodywork, spare wheels and tool box.  
(1) With tyres on front axles 385/65R22.5 or 325/95R24 and reinforced springs (OPT).

Higher speeds are allowed with load reductions subject to Astra technical office approval.  
Other tyres available, subject to Astra technical office approval.



## ENGINES

**CURSOR 13** turbo intercooler euro 3 diesel injection/cycle with electronic unit injection pumps. Single block head, four valves per cylinder, light alloy pistons. Total displacement: 12.882 cm<sup>3</sup>. Bore for stroke: 135 x 150 mm. 6 in-line cylinders. Water cooling. Dry air filter with safety cartridge. Vertical muffler.

|                 |                                    |
|-----------------|------------------------------------|
| Max.power(EEC)  | 279 KW (380 HP) @ 1900 rpm         |
| Max.torque(EEC) | 1800 Nm (183 kgm) @ 900 - 1500 rpm |
| Turbine         | with waste gate valve              |



## GEARBOX

Manual **ZF 16S2220TO** Ecosplit 4 technology gearbox with servoshift, 16 synchronised forward speeds + 2 reverse:

**On request:**  
ZF16S2320TD

| Gearbox model      | Rear axle ratio | Speed [kph] calculated at maximum power rpm |       |       |       |       |       |       |       |       |       |       |       |       |       |       |         |          |          |
|--------------------|-----------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|----------|----------|
|                    |                 | Gears / Gear ratios                         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |         |          |          |
|                    |                 | 1st   | 2nd   | 3rd   | 4th   | 5th   | 6th   | 7th   | 8th   | 9th   | 10th  | 11th  | 12th  | 13th  | 14th  | 15th  | 16th    | rev. 1st | rev. 2nd |
| <b>16S 2220 TO</b> |                 | 13.8  | 11.54 | 9.49  | 7.93  | 6.53  | 5.46  | 4.57  | 3.82  | 3.02  | 2.53  | 2.08  | 1.74  | 1.43  | 1.2   | 1.00  | .84     | 12.92    | 10.8     |
|                    | <b>4.227</b>    | 6.41  | 7.67  | 9.33  | 11.16 | 13.55 | 16.21 | 19.37 | 23.17 | 29.31 | 34.99 | 42.55 | 50.87 | 61.90 | 73.76 | 88.51 | 105.37* | 6.85     | 8.20     |
| <b>16S 2320 TD</b> |                 | 16.41                                       | 13.8  | 11.28 | 9.49  | 7.76  | 6.53  | 5.43  | 4.57  | 3.59  | 3.02  | 2.47  | 2.08  | 1.7   | 1.43  | 1.19  | 1.00    | 15.36    | 12.92    |
|                    | <b>4.227</b>    | 5.39  | 6.41  | 7.85  | 9.33  | 11.41 | 13.55 | 16.30 | 19.37 | 24.66 | 29.31 | 35.84 | 42.55 | 52.07 | 61.90 | 74.38 | 88.51   | 5.76     | 6.85     |

(\*) Max limited speed 90 km/h. Other speeds available, subject to the Astra technical office approval.



## CLUTCH

Single dry plate, diameter 17". Pull type engagement with diaphragm spring. Hydro-pneumatic power steering engagement control, with driven disc wear recovery slave cylinder.

**On request:**  
Ceramic clutch 17".



## AXLES

**FRONT**  
Steering, hot moulding in high tensile steel.

**REAR**  
Driving axle with double reduction: central with bevel gear, final by planetary gear in wheel hubs. Cross-axle differential lock.

**On request:** Rear-axle ratio 1:3.793; 1:4.229; 1:5.009; 1:5.558; 1:6.095; 1:6.588.



## SUSPENSIONS

**FRONT**  
1st axle, parabolic springs, 4 leaves 24x90 mm, with hydraulic shock absorbers. Standard stabilizer bar.

**On request:**  
Reinforced parabolic springs, 5 leaves 24x90 mm (mandatory with 9t version).

**REAR**  
Parabolic springs, 4 leaves 24x90 mm + 1 leaf 50x90 mm, with hydraulic shock absorbers. Standard stabilizer bar.



## CHASSIS

Special steel with high tensile strength limit, two flat and parallel side members (width 820 mm.), C section (320x70x8 mm), cross members bolted to the frame. R.B.M. (Rail Bending Moment): 143.149 Nm (14.597 Kg.m.). Steel front bumpers with headlamp protection grids, front manoeuvring hook, rear underrun bar, steel fuel tank capacity 300 litres.



## TYRES

**FRONT:** 315/80R22.5 156/150 K Single tubeless

**REAR:** 315/80R22.5 156/150 K Twin tubeless

Spare wheel on the chassis.

Other Possible combinations:

13 R22.5 156/150K

385/65 R22.5 160J (\*) + 315/80 R22.5 156/150K

325/95R24 162/160K (\*)

(\*) Mandatory with 9t front axle load.

Other tyres available, subject to the Astra technical office approval.



## BRAKES

Front and rear drum brakes, Duo-Duplex with automatic slack adjuster. ABS + EBL system.

**Service brake:** Pedal controlled air brake, acting on all wheels.

Solo vehicles: two independent circuits, one for 1st axle, one for 2nd axle.

Towing vehicles: three independent circuits, one for 1st axle, one for 2nd axle and another for the trailer.

**Emergency brake:** Integrated in service brake.

**Parking brake:** Mechanical spring-type with pneumatic control acting on 2nd axle wheels.

**IVECO BRAKE TURBO** engine brake: braking power 255 kW (342 HP).

**On request:**

1st axle immobiliser system.

OFF/ROAD button for excluding ABS for speed 15 kph.



## STEERING

ZF 8098 quadrilateral power steering on front axle wheels with variable ratio 1:22.2/1:26.2 with auxiliary cylinder. Circuit with main hydraulic pump on engine and emergency pump on gearbox. Steering rods with self-lubricating joints. Height and inclination mechanical adjustable steering wheel.



## ELECTRICAL SYSTEM

Alternator generator 90 A - 28 V (2520 W).

Accumulators: 2 in series, 180 Ah.

Starter motor 24 V 5.5 kW.

Mechanically controlled electrical circuit breaker.



## CAB

Standard white short cab built in galvanized pressed steel with hydraulic tilting up to 60°. Cab suspension with 4 helicoidal springs with coaxial shock absorbers and integrated dampers, anti-roll bar and end-of-stroke pads. Tinted electric door windows. Mechanical rear view mirrors, wide angle mirrors and front view mirror. Internal panels completely washable and fireproof. Compressed air quick coupling for cab cleaning. 4-speed ventilation and heating system with air recirculation system. Air suspended 3-way adjustable driver seat with seat belts. Mechanical passenger seat with seat belts.