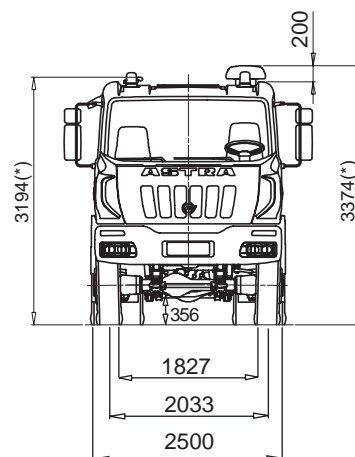
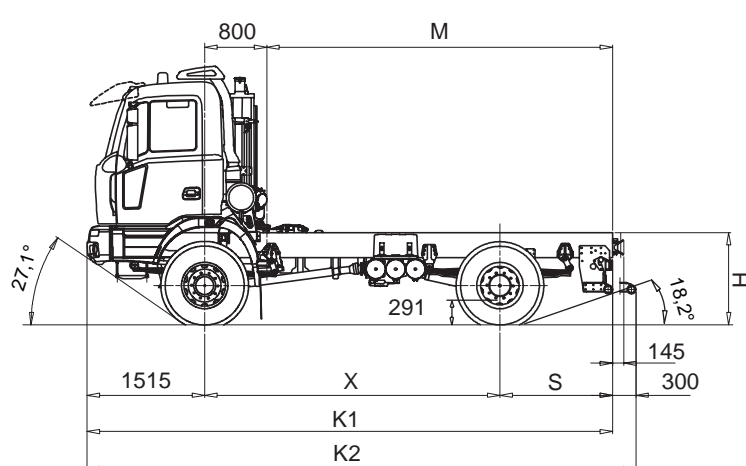


HD €5
chassis 4x4
44.41 / 44.44 / 44.48



(*) Unloaded

DIMENSIONS (mm) (Tyres 315/80R22.5 156/150K)

wheelbases	X	K1	K2	M	S	H		TURNING DIAMETER
						UNLOADED	LOADED	
B	3800	6765	7065	4450	1450	1280	1172	14300
C	4200	7565	7865	5250	1850			15650
D	4600	8365	8665	6050	2250			16940
E	5100	8865	9165	6550	2250			18550

WEIGHT (kg)

wheelbases	Distribution net weight (*)			Max. technical weight			
	1 st axle	2 nd axle	net weight	1 st axle	2 nd axle	Gross Vehicle weight	Gross Combination Weight
B	5545	2830	8375	8000 8500(1) 9000(1)	13000	22000 (2)	55000
C	5590	2835	8425				
D	5625	2850	8475				
E	5690	2820	8510				

(*) Weight including oil, fuel, spare wheel, driver Kg.75

(1) With tyres 1st axle 385/65R22,5 160 J or 365/85R20164G. Other tyres available, subject to the Astra technical office approval.

(2) Only for HD8 44.48 at max speed 50 Kph. Michelin/Pirelli tyres. Higher speed are allowed with load reductions subject to the Astra Technical office approval.



ENGINES

CURSOR 13 turbo intercooler diesel injection/cycle with electronic unit injection pumps. 6 in-line cylinders. Single block head, four valves per cylinder, light alloy pistons. Total displacement: 12.882 cm³. Bore for stroke: 135 x 150 mm. Water cooling. Viscostatic cooling fan. Dry air filter with safety cartridge. Vertical muffler. Emissions according to **€ 5** regulation norms SCR (Selective Catalytic Reduction) system composed of catalytic muffler, AdBlue-tank, injection and control system.

	44.41	44.44	44.48
Model	IVECO F3B E3681D	IVECO F3B E3681G	IVECO F3B E3681F
Max. power (EEC)	302 kW (410 HP)	324 kW (440 HP)	353 kW (480 HP)
Corresponding rpm	1.900 rpm	1.900 rpm	1.900 rpm
Max. torque (EEC)	1.900 Nm (194 kgm)	2.200 Nm (224 kgm)	2.300 Nm (234 kgm)
Corresponding rpm	1.000-1.440 rpm	1.000-1.440 rpm	1.000-1.440 rpm
Turbine	WG Waste Gate	VGT variable geometry	



GEARBOX

Manual gear ZF 16 S 2220 TO for HD8 44.41 / HD8 44.44 and ZF 16 S 2520 TO for HD8 44.48 with servoshift, 16 synchronised forward speeds + 2 reverse.

			Speed [kph] calculated at maximum power rpm (Tyres 13R22,5 156/150G)																	
			Gears																	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	RM	RM
ZF 16 S2220TO - ZF 16 S 2520TO	Gear ratios		13,80	11,54	9,49	7,93	6,53	5,46	4,57	3,82	3,02	2,53	2,08	1,74	1,43	1,20	1,00	0,84	12,92	10,80
	Rear axle ratio with transfer 1:1.0	1:4,229	6,7	8,0	9,7	11,7	14,2	16,9	20,2	24,2	30,6	36,5	44,4	53,1	64,6	77,0	92,4	110,0	7,2	8,6
		1:5,009	5,7	6,8	8,2	9,8	11,9	14,3	17,1	20,4	25,8	30,8	37,5	44,8	54,6	65,0	78,0	92,9	6,0	7,2
		1:5,558	5,1	6,1	7,4	8,9	10,8	12,9	15,4	18,4	23,3	27,8	33,8	40,4	49,2	58,6	70,3	83,7	5,4	6,5
		1:6,095	4,6	5,6	6,8	8,1	9,8	11,7	14,0	16,8	21,2	25,3	30,8	36,8	44,8	53,4	64,1	76,3	5,0	5,9
		1:6,588	4,3	5,1	6,3	7,5	9,1	10,9	13,0	15,5	19,6	23,4	28,5	34,1	41,5	49,4	59,3	70,6	4,6	5,5
	Gear ratios		13,80	11,54	9,49	7,93	6,53	5,46	4,57	3,82	3,02	2,53	2,08	1,74	1,43	1,20	1,00	0,84	12,92	10,80
	Rear axle ratio with transfer 1:1.6	1:4,229	4,2	5,0	6,1	7,3	8,9	10,6	12,6	15,1	19,1	22,8	27,8	33,2	40,4	48,1	57,5	68,7	4,5	5,4
		1:5,009	3,6	4,3	5,1	6,1	7,4	8,9	10,7	12,8	16,1	19,3	23,4	28,0	34,1	40,6	48,8	58,1	3,8	4,5
		1:5,558	3,2	3,8	4,6	5,6	6,8	8,1	9,6	11,5	14,6	17,4	21,1	25,3	30,8	36,6	43,9	52,3	3,4	4,1
		1:6,095	2,9	3,5	4,3	5,1	6,1	7,3	8,8	10,5	13,3	15,8	19,3	23,0	28,0	33,4	40,1	47,7	3,1	3,7
		1:6,588	2,7	3,2	3,9	4,7	5,7	6,8	8,1	9,7	12,3	14,6	17,8	21,3	25,9	30,9	37,1	44,1	2,9	3,4



P.T.O.

On request:

Gearbox	ZF16S2220TO-ZF16S2520TO	Max. torque	Application
P.T.O.	Ratio	Nm.	
ZF NH/1b	0,91/1,09:1	1000	For tipping unit pumps, pumps for cranes, ecc..
ZF NH/1c	0,91/1,09:1	1000	For tipping unit pumps, unit pumps for concrete, pumps for cranes, ecc..
ZF NH/4c	1,17/1,40:1	430	For tipping unit pumps, ecc..



TRANSFER

Mechanical with two ratios. It consists of a series of helical spur gears, mounted on three shafts, engaged with each other. Differential can be locked by pneumatic control.

Transmission ratio: 1:1 - 1:1,6

Front/rear torque distribution ratio: 1:2,2



CLUTCH

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



AXLES

FRONT

Steering cast iron type; with dual reduction, central by pinion-crown gear, side by means of epicycloidal assembly in wheel hubs.

On request:

Lockable differential by pneumatic control from driver's seat.

REAR

engine axle with dual reduction, central with bevel gear pair, final in wheel hubs by means of epicycloidal assembly. Differential lockable with pneumatic control from driver's seat.

On request:

Rear-axle ratio 1:4,229

Rear-axle ratio 1:5,009

Rear-axle ratio 1:5,558

Rear-axle ratio 1:6,095

Rear-axle ratio 1:6,588



SUSPENSIONS

FRONT

Parabolic springs with bushings, n° 4 leaves 24x90 mm, chord 1800 mm, with hydraulic shock absorbers.

Standard stabilizer bar.

On request:

Reinforced parabolic springs, n° 5 leaves 24x90 mm, chord 1800 mm. Extra-reinforced conventional springs, n° 10 leaves 15x90 mm, chord 1800 mm.

REAR

Parabolic springs with bushings, n° 4 leaves 24x90 mm, chord 1800 mm, + 1 leaf 50x90 mm, chord 1800 mm, with telescopic shock absorbers and standard stabilising bar.



CHASSIS

Special steel with high elasticity limit, two flat and parallel side members (width 820 mm.), C section (320x70x8mm), cross members riveted to the frame.

R.B.M. (Rail Bending Moment): 143.149 Nm (14.592 Kgm).

Steel front bumpers with headlamp protection grids, front manoeuvring hook, rear underrun bar, steel fuel tank capacity 300 litres.

On request:

Rapid attachment for compressed air for tyres'inflation.

Rear underrun bar in set back position.

Extra long underrun bar for concrete mixer.

Rear manoeuvring hook.

Rear automatic towing hook.

Rubber mudguards on 2nd axle.

Side windlass for spare wheel.



STEERING

Hydraulic power steering ZF 8098 with variable ratio 1:22.2/1:26.2. Hydraulic pump with gears flanged to engine. Steering linkage with self lubricating floating joints. Steering column adjustable in height and angle.



PNEUMATIC SYSTEM

Two-cylinder 630 cc compressor, APU (Air Processing Unit) that includes: regulation valve set at 10.3 bar, drier, 4-way safety valve, pressure reduction valve for parking circuit and services. 3 air tanks, capacity 30 litres + 2 with 20 litres. ABS system and EBL (Electronic Brake Limiter).



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:

TYRES	ASSEMBLY	
	FRONT	REAR
13 R 22,5 156/150G	S	D
12 00 R 20 156/150G		
385/65 R 22,5 160J*	S	
315/80 R 22,5 156/150K		D
365/85 R 20 164G*	S	S
395/85 R 20 168G*	S	S
525/65 R 20,5 173F		S

S single

D double

(*) Mandatory with 9 ton front axle load.



BRAKES

Front and rear "duo-duplex" self-adjusting wedge type brakes with automatic play take-up.

Total net braking surface 5.874 cm². ABS.

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

Solo vehicles, two independent circuits, one for 1st axle, one for 2nd; 1st category wheels anti-lock system.

Towing vehicles, three independent circuits, one for 1st axle, one for 2nd axle and another for the trailer; 1st category wheels anti-lock system.

Emergency brake: Incorporated in service brake.

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

IVECO BRAKE TURBO engine brake:

HD8 410 braking power 200 kW (272 cv)

HD8 440/480 braking power 255 kW (347 cv)

On request:

1st axle immobiliser system.

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



ELECTRICAL SYSTEM

Voltage: 24 V

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

Accumulators: 2 in series, 170 Ah.

Starter motor 24 V 5,5 kW.

Mechanically controlled electrical circuit breaker.

Anti-block system ABS with 4-conduits and 4-electric valves-electronic system.

Phonic wheels and sensors on 1st and 2nd axle.

1 electrical joint 7-pole(ISO 7638) for trailer ABS(if applicable).

1 electrical joints 15-pole(ISO 12089-4091) for trailer lighting (if applicable).

Headlamp geometry corrector .

Electrical provision for outfitters.

Provision for diagnostics.

Provision for radio/cb (without speakers)

Glow plug for cold start.

On request:

170 Ah tropicalised accumulators;

Reverse alarm;

Electrically controlled main current circuit breaker.



CAB

White cab with hydraulic tipping. Built in moulding fiberglass with tubular steel armature. Tested on the most demanding off road routes. Cab suspension with guiding arms, spiral springs, double action shock absorbers, anti-roll bar and end-of-stroke pads. Internal panels completely washable and fireproof. 4-speed ventilation and heating system with air recirculation system. Collapsible first step. Electric power windows on driver and passenger doors. Beacon lights on cab roof. Driver seat with pneumatic suspension and seat belt. Passenger seat with mechanical suspension with seat belts. Tinted athermic windows. Steering wheel adjustable in hight and slope with pneumatic control.

On request:

Car radio RDS, CD;

Car radio RDS, CD on the steering wheel controls;

Car radio RDS, CD, MP3, Blue Tooth technology;

Compressed air quick coupling for cab cleaning;

Roof hatch;

Air conditioning;

Centralized closing of the doors with remote control;

Metallic colour cab;

Non-metallic colour cab;

Heated and electric powered rear view mirrors;

Cab rear window;

External sun visor.



SERVICE DATA(I)

Engine oil sump and filters	28
Gearbox oil: ZF 16S2220TO/ZF 16S2520TO	11
Power steering oil	8,5
Cab tipping oil	1
Clutch circuit oil	0,5
Transferer oil	6,5
Front axle with final red. oil	6,5
Rear axle with final red. oil	16
Cooling system water	33
Diesel	300
AD Blue	45



INSTRUMENTATION

Trip Computer multifunction display. Multiplex electronic system for fundamental information for the driver: average speed, consumption and general information about the main components for ideal use of the vehicle.

It also allows to carry out the daily controls on the vehicle at any moment, thus optimizing the time and energies needed for production's purposes. Dashboard and ergonomic instrument board contain the function buttons and the identification commands.

Indicator lights: engine oil low pressure, alternator charging low, main beam lights, side lights, engine warm-up, rear fog light, hazard lights, tractor turn indicators, trailer turn indicators (if applicable), rotating lights, cab lifted, axles differential locked, differential lock, front brakes air pressure low, rear brakes air pressure low, trailer brakes air pressure low (if applicable), parking brake engaged, splitter (reduction on), slow speeds (1-4/9-12), power take-off on (if applicable) air filters clogged, power steering oil level low, rear view mirrors heated (if applicable), tractor ABS, trailer ABS (if applicable), main steering circuit failure, steering auxiliary circuit failure, low ureas' level

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DEALER

Characteristics and equipment are subject to changes without prior notice.



Technical data and general specifications - validity to be checked according to each individual country.