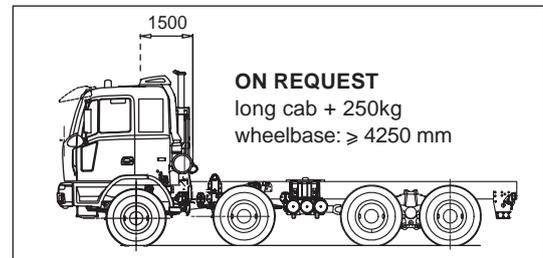
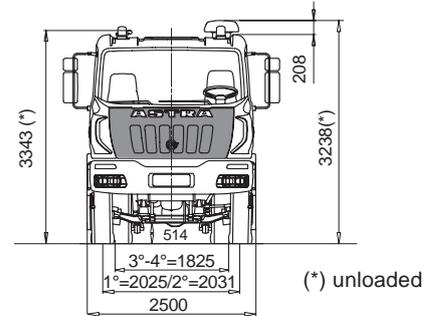
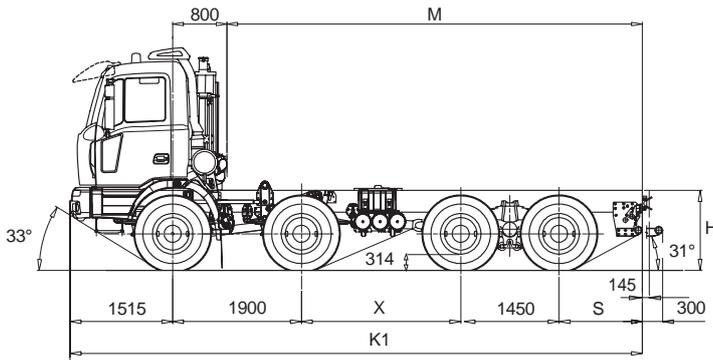


chassis 8x4
84.38 / 84.42 / 84.44 / 84.48 / 84.54

DIMENSIONS (mm) short cab (Tyres 13R22,5 156/150G)

wheelbases	X	K1	M	S	S ON REQUEST	H		TURNING DIAMETER
						UNLOADED	LOADED	
A	2350	8415	6100	1200	875/1500	1194	1137	17400
B	2600	8665	6350	1200	875/1500			18200
C	2850	8915	6600	1200	875/1500			19000
D	3100	9165	6850	1200	875/1500			19700
E	3350	9415	7100	1200	1500			20500
F	3600	9965	7650	1500	-			21300
G	4100	10465	8150	1500	-			22800
H	5060	12025	9710	2100	-			27400


WEIGHT (kg)

wheelbases	Distribution net weight (*)				Max. technical weight				
	1 st axle	2 nd axle	3 rd +4 th axle	net weight	1 st +2 nd axle		3 rd +4 th axle	Gross Vehicle weight	Gross Combination weight
A	3792	3392	4292	11476	16000	18000 (1)	32000	50000 (2)	104000
B	3783	3383	4348	11514					
C	3775	3378	4388	11541					
D	3793	3395	4422	11610					
E	3780	3380	4524	11684					
F	3770	3372	4578	11720					
G	3771	3373	4598	11742					
H	3600	3205	4360	11165					

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

 (1) With tyres 1st axle 385/65R22,5 160J or 365/85R20184G. Other tyres available, subject to the Astra technical office approval.

(2) HD8 84.48 and HD8 84.54 only at max speed 50 km/h. Michelin/Pirelli tyres. Higher speed are allowed with load reductions subject to the Astra Technical office approval.

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



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 cm³. Bore for stroke: 135 x 150 mm. 6 in-line cylinders. Water cooling. Viscostatic cooling fan. Dry air filter with safety cartridge. Vertical muffler

	84.38	84.42	84.44	84.48	84.54*
Model	IVECO F3B	IVECO F3B	IVECO F3B	IVECO F3B	IVECO F3B
Max. power (EEC)	280 kW (380 HP)	309 kW (420 HP)	324 kW (440 HP)	353 kW (480 HP)	397 kW (540 HP)
Corresponding rpm	1.900	1.900	1.900	1.900	1.900
Max. torque (EEC)	1.800 Nm (183 kgm)	1.900 Nm (194 kgm)	2.100 Nm (214 kgm)	2.200 Nm (224 kgm)	2.350 Nm (240 kgm)
Corresponding rpm	1.000-1.440	1.000-1.440	1.000-1.440	1.000-1.440	1.000-1.690
Turbine	WG Waste Gate		VGT variable geometry		

*Requires additional engine radiator, for extremely hot climate (>42°C).



GEARBOX

Manual gear **ZF 16 S 2220 TO** for HD8 84.38 / HD8 84.42 / HD8 84.44 and **ZF 16 S 2520 TO** for HD8 84.48 / HD8 84.54 - with servoshift, 16 synchronised forward speeds + 2 reverse.

On request: ASTRONIC automatic gearbox **ZF 16AS2601 OD** for HD8 84.44 and HD8 84.48 only.

		Speed [kph] at maximum power																		
		Gears																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	RM	RM	
ZF 16 S 2220TO 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	1:3,793	7,5	8,9	10,9	13,0	15,8	18,9	22,5	27,0	34,1	40,7	49,5	59,2	72,0	85,9	103,0	122,7	8,0	9,5
		1:4,229	7,1	8,5	10,3	12,3	15,0	17,9	21,4	25,6	32,4	38,7	47,0	56,2	68,4	81,5	97,8	116,4	7,6	9,1
		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



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..
ZFN221/10bpl+N353/1c	1,75/2,09:1+0,91/1,09:1	560+600	double PTO for concrete pumps

ZF NMV1 221 Power take-off (ratio 1,55:1) max available torque 1300 Nm for concrete pumps (only with gear ZF16S2520TO).

Power take off at flywheel (ratio 1,29:1) max available torque 900 Nm for concrete mixers.



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 axles, hot moulding in high tensile steel. Wheel stud protection.

REAR

Two tandem drive axles. Double reduction: crown wheel and pinion centrally and epicyclical group in wheel hubs. 2nd axle with torque distributor to the two rear axles. Lockable differentials by pneumatic control from driver's seat. Tandem assembled to the chassis by reaction rods with silentblock.

On request:

Rear-axle ratio 1:3,793
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

1st and 2nd axle, parabolic springs, n° 3 leaves 26x90 mm, hydraulic shock absorbers.

stabilizer bar standard on 1st axle.

On request:

stabilizer bar on 2nd axle.
Reinforced parabolic springs, n° 4 leaves 26x90 mm.
Mandatory with 1st + 2nd 18t axles load.

REAR

Parabolic springs, swivelling on central pin: n° 4 leaves 40x100 mm, torque bars and stiffening brackets.
Stabilizer bar as standard on 4th axle.

On request:

stabilizer bar on 3rd axle.
Extra-reinforced conventional springs, n° 10 leaves 25x100 mm.
Mandatory for heavy duty version.
Light parabolic springs for light vehicle, n° 3 leaves 40x100 mm.



CHASSIS

Special steel with high elasticity limit, two flat and parallel side members width 820 mm., C section 320x90x10mm, cross members riveted to the frame.

R.B.M. (Rail Bending Moment): 202.020 Nm (20.593 Kgm.).

Steel front bumpers with headlamp protection grids, front manoeuvring hook, rear underrun bar, rubber mud-guard 2nd axle, 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.
Front bumper climbing step.
Rear manoeuvring hook.
Rear automatic towing hook.
Rubber mudguards on 3rd and 4th axle.



STEERING

ZF 8099 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.



TYRES

FRONT:

13R22,5 156/150 G Single tubeless

REAR:

13R22,5 156/150 G Twin tubeless

Spare wheel on the chassis.

Other Possible combinations:

TYRES	ASSEMBLY	
	FRONT	REAR
13R22,5 156/150 G		
12 00 R 20 156/150G	S	D
315/80 R 22,5 156/150G		
365/85 R 20 164 G	S	
13R22,5 156/150 G		D
12 00 R 20 156/150G		
385/65 R 20 164 K	S	
315/80 R 22,5 156/150G		D

S single

D double

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



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).



BRAKES

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

Total net braking surface 12.368 cm².

ABS system.

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

Solo vehicles, two independent circuits, one for 1st and 2nd axle, one for 3rd and 4th axle; 1st category wheels anti-lock system.

Towing vehicles, three independent circuits, one for 1st and 2nd axle, one for 3rd and 4th 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 3rd and 4th axle wheels.

IVECO BRAKE TURBO engine brake:

HD8 380/420 HP braking power 200 kW (272 HP)

HD8 440/480/540 HP braking power 255 kW (347 HP)

On request:

Hydraulic interarder.

1st axle immobiliser system.

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

HD8 380/420 cv - Front and rear "simplex" self-adjusting brakes system.
No ABS system.





ELECTRICAL SYSTEM

Voltage: 24 V
 Alternator generator 90 A - 28 V (2520 W).
 Accumulators: 2 in series, 143 Ah.
 Starter motor 24 V 5,5 kW.
 Mechanically controlled electrical circuit breaker.
 Wheel ABS release system with 4 channel and 4 solenoid valves ECU.
 Phonic wheels and sensors on 1st and 3rd 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).
 Electrical provision for outfitters.
 Provision for diagnostics.
 Provision for radio/cb (without speakers)
 Glow plug for cold start.
On request:
 143 Ah tropicalised accumulators;
 170 Ah;
 Reverse alarm;
 Electric main current cut-off switch.



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, 4 helicoidal 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. Driver seat with pneumatic suspension and seat belt. Mechanical passenger with seat belts.
 Tinted athermic windows. Steering wheel adjustable in height and angle.
On request:
 Car radio RDS, CD;
 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;
 Extra colour cab: metallic / non-metallic;
 Heated and electric powered rear view mirrors;
 Cab rear window;
 External sun visor.



SERVICE DATA(I)

Engine oil sump and filters	28
Gearbox oil:	13
Power steering oil	13
Cab tipping oil	1
Clutch circuit oil	0,5
Integral PTO oil	3
Intermediate axle with final red. oil	27
Rear axle with final red. oil	16
Cooling system water	33
Diesel	300



INSTRUMENTATION

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), ABS, trailer ABS (if applicable), main steering circuit failure, steering auxiliary circuit failure.

ASTRA Veicoli Industriali

Via Caorsana, 79
 29100 Piacenza (Italy)
 Tel. ++39-523/5431
 Fax ++39-523/59.17.73
 www.astraspa.com

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.