


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

X	K1	K2	M max (*)	S	S ON REQUEST	H		TURNING DIAMETER (wall to wall)
						UNLOADED	LOADED	
2350	8425	8725	6100	1200	875/1500	1194	1129	19100
2600	8675	8975	6350	1200	875/1500			19900
2850	8925	9225	6600	1200	875/1500			20700
3100	9175	9475	6850	1200	875/1500			21500
3350	9425	9725	7100	1200	1500			22200
3600	9975	10275	7650	1500				23000
4100	10475	10775	8150	1500				24600

(*) M max.: indicative value to be confirmed by bodybuilder


WEIGHT (kg)

X	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
2350	3633	3233	4110	10975	16000	18000 (1)	32000	50000 (2)	104000
2600	3625	3225	4150	11000					
2850	3618	3218	4185	11020					
3100	3630	3230	4260	11120					
3350	3628	3228	4290	11145					
3600	3615	3215	4355	11185					
4100	3610	3210	4410	11230					

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

 (1) With tyres 1st - 2nd axle 385/65R22,5 160 J, reinforced springs (OPT). Other tyres available, subject to the Astra technical office approval.

(2) Only for HD9 84.48, HD9 84.52 and HD9 84.56 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.

	84.41	84.44	84.48	84.52	84.56
Model	IVECO F3B E3681D	IVECO F3B E3681G	IVECO F3B E3681F	IVECO F3B E3681E	IVECO F3B E3681A
Max. power (EEC)	302 kW (410 HP)	324 kW (440 HP)	353 kW (480 HP)	382 kW (520 HP)	412 kW (560 HP)
Corresponding rpm	1.900 rpm	1.900 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)	2.400 Nm (245 kgm)	2.500 Nm (255 kgm)
Corresponding rpm	1.000-1.440 rpm	1.000-1.440 rpm	1.000-1.440 rpm	1.000-1.440 rpm	1.000-1.690 rpm
Turbine	WG Waste Gate	VGT variable geometry			



GEARBOX

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

ZF16S2220TO: HD9 84.41/HD9 84.44

ZF16S2520TO: HD9 84.48/HD9 84.52/HD9 84.56

On request:

ZF16S2320TD: HD9 84.41/HD9 84.44/ HD9 84.48

ASTRONIC ZF16AS2601OD: from 440CV

		Speed [kph] calculated at maximum power rpm																		
		Gears																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	RM	RM	
ZF 16S2220TO ZF 16S2520TO	Gear ratios	16.41	13.80	11.28	9.49	7.76	6.53	5.43	4.57	3.59	3.02	2.47	2.08	1.70	1.43	1.19	1.00	15.36	12.92	
	Rear axle ratio	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*	122.7*	8.0	9.5
		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
		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
		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
		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
		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
ZF16S2320TD	Gear ratios	16.41	13.80	11.28	9.49	7.76	6.53	5.43	4.57	3.59	3.02	2.47	2.08	1.70	1.43	1.19	1.00	15.36	12.92	
	Rear axle ratio	3,793	6,3	7,5	9,1	10,9	13,3	15,8	19	22,5	28,7	34,1	41,7	49,5	60,6	72*	86,6*	103*	6,7	8
		4,229	5,6	6,7	8,2	9,7	11,9	14,2	17	20,2	25,7	30,6	37,4	44,4	54,4	64,6	77,7*	92,4*	6	7,2
		5,009	4,8	5,7	6,9	8,2	10,1	11,9	14,4	17,1	21,7	25,8	31,6	37,5	45,9	54,6	65,6	78*	5,1	6
		5,558	4,3	5,1	6,2	7,4	9,1	10,8	12,9	15,4	19,6	23,3	28,5	33,8	41,4	49,2	59,1	70,3*	4,6	5,4
		6,095	3,9	4,6	5,7	6,8	8,3	9,8	11,8	14	17,9	21,2	26	30,8	37,7	44,8	53,9	64,1	4,2	5
		6,588	3,6	4,3	5,3	6,3	7,6	9,1	10,9	13	16,5	19,6	24	28,5	34,9	41,5	49,8	59,3	3,9	4,6

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



P.T.O.

On request:

Gearbox	ZF16S2220TO-ZF16S2520TO	ZF 16AS2601OD	Max. torque Nm.	Application
P.T.O.	Ratio	Ratio		
ZF NH/1b	0,91/1,09:1	1,35:1	1000	For tipping unit pumps, pumps for cranes, ecc..
ZF NH/1c	0,91/1,09:1	1,35:1	1000	For tipping unit pumps, unit pumps for concrete, pumps for cranes, ecc..
ZF NH/4c	1,17/1,40:1	1,21:1	430	For tipping unit pumps, ecc..
ZFN221/10b+PL+NL/1c	1,75/2,09:1+0,91/1,09:1	2,15:1+1,48:1	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.

ZF NMV 221 Power take-off (ratio 0,98:1) max available torque 2000 Nm for concrete pumps.

Power take off at flywheel (ratio 1,29:1) max available torque 900 Nm for concrete mixers (without interarder).



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.

On request: Ceramic clutch 17"



AXLES

FRONT

Steering axle, hot moulding in high tensile steel. Wheel stud protection.

REAR

Two drive axles in tandem. Double reduction: central with bevelled pair, final in the wheel hubs by means of epicycloidal assembly. 2nd axle with distributor which distributes the torque between the two axles. Differential lockable 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.

Standard stabilizer bar on 1st axle.

On request:

Stabilizer bar on 2nd axle.

Reinforced parabolic springs, n° 4 leaves 26x90 mm.

Mandatory with 9t load 1st + 2nd axle.

REAR

Parabolic springs, swivelling on central pin: n° 4 leaves 40x100 mm, torque bars and stiffening brackets.

Standard stabilizer bar on 4th axle.

On request:

Stabilizer bar on 3rd axle.

Extra-reinforced conventional springs, n° 10 leaves 25x100 mm.

Mandatory for heavy duty version.



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.

Rear manoeuvring hook.

Rear automatic towing hook.

Rubber mudguards on 3rd and 4th axle.

Side windlass for spare wheel (wheelbases 2350 - 2600 - 2850 excluded)



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
12 00 R 20 156/150G	S	D
315/80 R 22,5 156/150K		
385/65 R 22,5 160J(*)	S	
315/80 R 22,5 156/150K		D

S single

D double

(*) Mandatory with 9 ton front axle load.

Other tyres available, subject to 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.

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:

HD9 410 braking power 200 kW (272 cv)

HD9 440/480/520/560 braking power 255 kW (347 cv)

On request:

Hydraulic intarder (84.44 / 84.48 / 84.52 / 84.56).

1st and 2nd axle immobiliser system.

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



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 pneumatic adjustable steering column.



SERVICE DATA(I)

Engine oil sump and filters	28
Gearbox oil: ZF 16AS2601OD	13
Gearbox oil: ZF 16S2220TO/ZF 16S2520TO	13
Power steering oil	18
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
AD Blue	45



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 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).
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;
Electric main current cut-off switch.



CAB

White 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. 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.

On request:

Air conditioning with anti-pollen filter
Cab rear window.
Car radio RDS, CD.
Car radio RDS, CD with steering wheel controls
Car radio RDS, CD, MP3 Bluetooth technology.
External sun visor.
Extra cab colour: to be specified in the order.
Heated and electric powered rear view mirrors.
Remote controlled and centralized closing of doors.
Roof hatch.
Rotating lights on top of the cab.
White engine hood with central mask in IC575 colour



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.