


DIMENSIONS (mm)

X	K	M max (*)	S	S ON REQUEST	H		TURNING DIAMETER (wall to wall)
					unloaded	loaded	
3200	7375	5050	1200	-	1193	1129	15900
3500	7675	5350	1200	-			16800
3800	7975	5650	1200	-			17800
4100	8275	5950	1200	1500/1900			18700
4500	8675	6350	1200	1900/2600			20000
4750	9625	7300	1900	-			20700

(*) M max.: indicative value to be confirmed by bodybuilder
(Tyres 13R22.5)


WEIGHT (kg)

X	Distribution net weight (*)			Max technical weight				
	1 st axle	2 nd + 3 rd axle	Net weight	1 st axle		2 nd + 3 rd axle	Gross Vehicle Weight	Gross Combination Weight
3200	4857	4733	9590	8000 8500 (1)	9000 (1) (2)	32000 (2)	40000 (2)	121.500
3500	4890	4730	9620					
3800	4929	4741	9670					
4100	4952	4743	9695					
4500	4985	4745	9730					
4750	4965	4845	9810					

(*) Weight including oil, fuel, spare wheel, driver Kg.75, with 13R22.5 tyres

(1) With tyres on front axle 385/65R22.5 or 325/95R24 and reinforced springs (OPT).

(2) With tyres 325/95R24 or max speed limited to 70 Km/h depending on pneus type and brand.

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 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

	64.38	64.42	64.44	64.48	64.54*
Model	CURSOR 13	CURSOR 13	CURSOR 13	CURSOR 13	CURSOR 13
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	1900 rpm				
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 rpm				1.000-1.690 rpm
Turbine	WG Waste Gate		VGT Variable Geometry Turbine		

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



GEARBOX

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

ZF16S2220TO: HD9 64.38/HD9 64.42 / HD9 64.44

ZF16S2520TO: HD9 64.48/HD9 64.54

On request:

ZF16S2320TD: HD9 64.38/HD9 64.42/ HD9 64.44/ HD9 64.48

ZF ASTRONIC 16AS2630TO: HD9 64.44/ HD9 64.48/ HD9 64.54

		Speed [kph] calculated at maximum power rpm																		
		Gears																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	RM1	RM2	
ZF 16S2220TO ZF 16S2520TO	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	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
		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	19,0	22,5	28,7	34,1	41,7	49,5	60,6	72,0	86,6	103,0	6,7	8,0
		4,229	5,6	6,7	8,2	9,7	11,9	14,2	17,0	20,2	25,7	30,6	37,4	44,4	54,4	64,6	77,7	92,4*	6,0	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	78,0	5,1	6,0
		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	14,0	17,9	21,2	26,0	30,8	37,7	44,8	53,9	64,1	4,2	5,0
6,588	3,6	4,3	5,3	6,3	7,6	9,1	10,9	13,0	16,5	19,6	24,0	28,5	34,9	41,5	49,8	59,3	3,9	4,6		

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



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..
ZF N221/10B-PL + NL/1c	1,75/2,09:1+0,91/1,09:1	560+600	Double PTO for concrete pumps

ZF NMV 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 Multipower (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.

On request:

Ceramic clutch 17".



AXLES

FRONT

Steering, hot moulding in high tensile steel.

Wheel stud protection.

REAR

Two drive axles in tandem. Double reduction: central with beveled pair, final in the wheel hubs by means of epicycloidal assembly. Torque distribution between the axles by means of a distributor fitted on the intermediate axle. Differential lockable from driver seat. Tandem assembled to the chassis by reaction rods with silentblocks.

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 axle, parabolic springs, n° 4 leaves 24x90 mm, with hydraulic shock absorbers.

Standard stabilizer bar.

On request:

Reinforced parabolic springs, n° 5 leaves 24x90 mm (mandatory with 9t version).

REAR

Parabolic springs, swivelling on central pin: n° 4 leaves 40x100 mm.

On request:

stabilizer bar on 2nd axle.

stabilizer bar on 3rd axle.

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



CHASSIS

Special steel with high tensile strength limit, two flat and parallel side members (width 820 mm.), C section (320x90x10mm), cross members bolted 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, steel fuel tank capacity 300 litres.

On request:

Rapid pneumatic connection for tyre 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 and 3rd axle.

Side winch for spare 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
12.00R20 156/150G	S	D
315/80R22.5 156/150K		
385/65R22.5 160J (*)	S	
315/80R22.5 156/150K		D
325/95R24 162/160K (*)	S	D
12.00R24 160/156G (*)		

S single

D double

(*) Mandatory with 9 ton front axle load

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 9.276 cm².

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 and 3rd axle; 1st category wheels antilock system.

Towing vehicles: three independent circuits, one for 1st axle, one for 2nd and 3rd axle and another for the trailer; 1st category wheels antilock system.

Emergency brake: Incorporated in service brake.

Parking brake: Mechanical spring-type with pneumatic control acting on 2nd and 3rd axle wheels.

IVECO BRAKE TURBO engine brake:

HD9 380/420 HP braking power 255 kW (342 HP).

HD9 440/480/540 HP braking power 300 kW (402 HP).

On request:

Hydraulic intarder (HD9 64.38 and HD9 64.42 excluded).

1st axle immobiliser system.

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

HD9 380/420 cv - Front and rear "simplex" self-adjusting brake system.

No ABS system.

No hydraulic intarder.



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.



SERVICE DATA(I)

Engine oil sump and filters	28 (+2,5)
Gearbox oil	14,5
Power steering oil	8,5
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



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 joint 15-pole (ISO 12089-4091) for trailer lighting (if applicable).
 Offset trim lights.
 Electrical provision for outfitters.
 Provision for diagnostics.
 Provision for radio/cb (without speakers).
 Glow plug for cold start.
On request:
 225 Ah accumulators;
 Reverse alarm.



CAB

Standard white short cab (AD/HD) 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.
On request:
 RHD.
 Air conditioning with anti-pollen filter.
 Cab rear window.
 Car radio RDS, CD.
 Car radio RDS, CD, MP3 Bluetooth technology.
 External sun visor.
 Extra colour cab: to be specified in the order.
 Heated and electric powered rear view mirrors.
 Long cab (AT/HT) for wheelbase > 3500 mm with interior equipment (seats and beds) on request.
 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

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.

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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 configuration