



(\*) unloaded


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

X	K	G (1)			H		A (*)		E (1)		F (1)		TURNING DIAMETER	
		std	unloaded	loaded	unloaded	loaded	unloaded	loaded	std	std	sidewalks	walls		
3200	6975	300	1192	1129	1514	1457			2320	2170	14200	15900		
3500	7275								2620	2170	15100	16800		
3800	7575								2920	2170	16100	17800		

(1) Standard fifth wheel position. In case of different positioning needs, the quote may change in relation with the technical GVW of the vehicle. Values to be confirmed in combination with the semitrailer.

(\*) With swivelling fifth wheel + 100 mm


**WEIGHT (Kg)**

Distribution net weight (*)				Max technical weight					
X	1 <sup>st</sup> axle	2 <sup>nd</sup> + 3 <sup>rd</sup> axle	NET WEIGHT	1 <sup>st</sup> axle		2 <sup>nd</sup> + 3 <sup>rd</sup> axle	Weight on fifth wheel	Tractor	Gross Combination
3200	5330	5255	10585	8000 8500 (1)	9000 (2)	32000	30415	40000 (3)	104000
3500	5355	5250	10605				30395		
3800	5395	5265	10660				29340		

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

 (1) With tyres 1<sup>st</sup> axle 385/65R22,5 160 J. Other tyres available, subject to the Astra technical office approval.

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

(3) Only at max speed of 70 Kph with Continental and Michelin tyres. Higher speeds/loads are allowed with load/speed 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 cm<sup>3</sup>. 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.

	64.41T	64.44T	64.48T	64.52T	64.56T
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	1900				
Max Torque (EEC)	1900 Nm (194 kgm)	2200 Nm (224 kgm)	2300 Nm (234 kgm)	2400 Nm (245 kgm)	2500 Nm (255 kgm)
Corresponding rpm	1000-1440				1000-1690
Turbine	WG Waste Gate	VGT Variable Geometry Turbine			



## GEARBOX

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

**ZF16S2220TO:** HD9 64.41T/HD9 64.44T

**ZF16S2520TO:** HD9 64.48T/HD9 64.52T/HD9 64.56T.

**On request:**

**ZF16S2320TD:** HD9 64.41T/HD9 64.44T/HD9 64.48T

**ASTRONIC ZF 16AS2630 TO:** from 440HP

		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		
<b>T BOX = 1</b>	ZF16S2320TD	<b>Gear ratios</b>	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	
		<b>Rear axle ratio</b>	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			
<b>T BOX = 1</b>	ZF16S2220TO/ZF 16S2520TO	<b>Gear ratios</b>	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	
		<b>Rear axle ratio</b>	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			



## P.T.O.

**On request:**

Gear	ZF 16S2220TO-ZF 16S2520TO	Max Torque	Application
P.T.O.	Ratio	Nm	
ZF NH/ 1b	0,91/ 1,09:1	1000	For tipping semitrailer pumps, crane pumps, etc...
ZF NH/ 1c	0,91/ 1,09:1	1000	For tipping semitrailer pumps, crane pumps, etc...
ZF NH/ 4c	1,17/ 1,40:1	430	For tipping semitrailer pumps, crane pumps, etc...



## 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 tandem drive axles. Double reduction: central with crown wheel and pinion and final by epicyclical group in wheel hubs. 2<sup>nd</sup> axle with torque distributor to the two rear axles. Lockable differentials by pneumatic control from driver 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

1<sup>st</sup> 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.

### REAR

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

#### On request:

Stabilizer bar on 2<sup>nd</sup> axle.

Stabilizer bar on 3<sup>rd</sup> axle.

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



## CHASSIS

Special steel with high elasticity limit, two flat and parallel side members width 820 mm., C section (320x90x10mm), with cross members riveted to the frame. Steel front bumpers with headlamp protection grids, front manoeuvring hook, rear underrun bar, steel fuel tank capacity 300 litres. Fifth wheel helper frame, spot and side alighting step, rubber mudguards on 2<sup>nd</sup> and 3<sup>rd</sup> axles, toolbox.

#### On request:

Fixed 3" ½ fifth wheel.

Rapid attachment for compressed air for tyres' inflation.

Rear manoeuvring hook.

Side winch for spare wheel.

Swivelling 3" ½ fifth 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
12.00 R20 156/150G	S	D
315/80 R22.5 156/150K		
385/65 R22.5 160J(*)	S	
315/80 R22.5 156/150K		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 + 1 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 cm<sup>2</sup>. ABS.

**Service brake:** Pedal controlled air brake, acting on all wheels. Three independent circuits, one for 1<sup>st</sup> axle, one for 2<sup>nd</sup> and 3<sup>rd</sup> axle and another for the semi-trailer.

**Emergency brake:** Incorporated in service brake.

**Parking brake:** Manual spring-type with pneumatic control acting on 2<sup>nd</sup> and 3<sup>rd</sup> axle wheels.

**IVECO BRAKE TURBO engine brake:**

**HD9 410 HP braking power 200 kW (272 HP)**

**HD9 440/480/520/560 HP braking power 295 kW (408 HP)**

#### On request:

Hydraulic intarder (64.44T / 64.48T / 64.52T / 64.56T).

1<sup>st</sup> 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. Pneumatically adjustable steering column for height and inclination.



## 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 main circuit breaker.  
 Anti-block system ABS with 4-conduits and 4-electric valves electronic system.  
 1 electrical joint 7-pole (ISO 7638) for semitrailer ABS.  
 1 electrical joint 15-pole (ISO 12089-4091) for semitrailer lighting.  
 Offset trim lights.  
 Electrical provision for outfitters.  
 Provision for diagnostics.  
 Provision for radio/cb (without speakers)  
 Glow plug for cold start.  
**On request:**  
 170 Ah tropicalized accumulators.  
 Reverse alarm.  
 Electrically controlled main circuit breaker.  
 220Ah accumulators.



## CAB

White cab built in galvanized pressed steel with hydraulic tilting up to 60°. Cab suspension with 4 helical 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.  
 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



## SERVICE DATA(I)

Engine oil sump and filters .....	28
Gearbox oil: ZF 16AS2630 TO .....	13
Gearbox oil: ZF 16S2220TO/ZF 16S2520TO .....	13
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
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.

**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, semitrailer turn indicators, rotating lights, cab lifted, axles differential locked, differential lock, front brakes air pressure low, rear brakes air pressure low, semitrailer brakes air pressure low, 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, semitrailer ABS, main steering circuit failure, steering auxiliary circuit failure, low urea 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