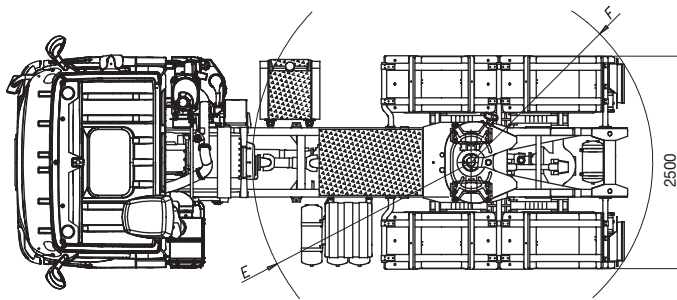
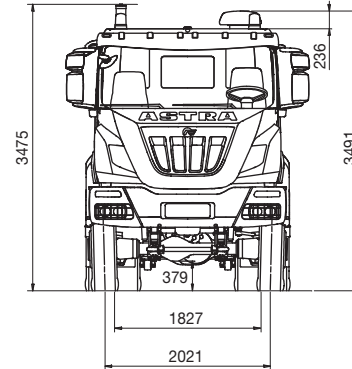
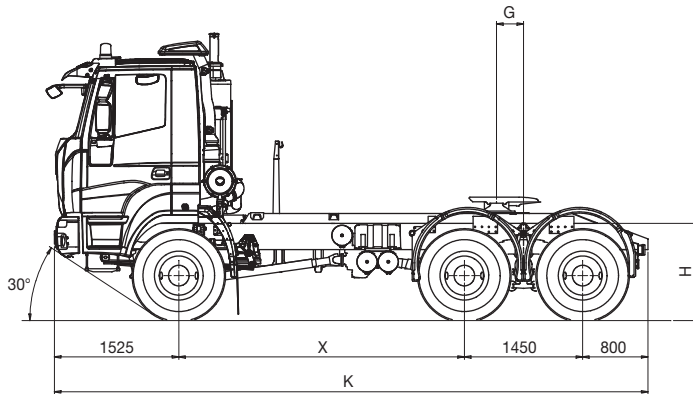


HD9

tractor 6x6
66.38T / 66.42T / 66.44T / 66.48T / 66.54T


ON REQUEST
■ RHD VERSION


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

X	G(1)	E(1)	F(1)	K	H		A (2)		TURNING DIAMETER	
	STD	STD	STD		UNLOADED	LOADED	UNLOADED	LOADED	SIDEWALKS	WALL TO WALL
3500	300	2670	2170	7275	1252	1189	1572	1509	15700	17400
3800	300	2970	2170	7575					16700	18300

(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.

(2) With swivelling fifth wheel + 100 mm.


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	Fifth Wheel	Gross Vehicle Weight	Gross Combination Weight
3500	5575	5605	11180	8000	8500	32000	28820	40000 (2)	104000
3800	5625	5585	11210		9000 (1) 10000 (3)		28790		

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

(1) With tyres 1st axle 385/65R22,5160J or 365/85R20166G. Other tyres available, subject to the Astra technical office approval.

(2) HD9 66.48T and HD9 66.54T only at max speed 50 km/h. Michelin/Pirelli tyres. Higher speeds/loads are allowed with load/speed reductions subject to the Astra Technical office approval.

(3) 10.000 Kg optional: see description on the following pages 10 t.



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

	66.38T	66.42T	66.44T	66.48T	66.54T
Model	IVECO F3B	IVECO F3B	IVECO F3B	IVECO F3B	IVECO F3B
Max. power (EEC)	279 kW (380 HP)	309 kW (420 HP)	324 kW (440 HP)	353 kW (480 HP)	397 kW (540 HP)
Corresponding rpm	1900				
Max. torque (EEC)	1800 Nm (183 kgm)	1900 Nm (194 kgm)	2100 Nm (214 kgm)	2200 Nm (224 kgm)	2.350 Nm (240 kgm)
Corresponding rpm	1000-1440				1.000-1.690
Turbine	WG Waste Gate			VGT variable geometry	



GEARBOX

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

ZF 16 S 2220 TO: HD9 66.42T/HD9 66.44T

ZF 16 S 2520 TO: HD9 66.48T/ HD9 66.54T

Optional:

ZF 16 S 2320 TD: HD9 66.38T/ HD9 66.42T/ HD9 66.44T

ASTRONIC ZF 16AS2601 OD: HD9 66.44 T/ HD9 66.48T and HD9 66.54T

Automatic gearbox ALLISON 4700: HD9 66.44T/HD9 66.48T/ HD9 66.54T wheelbase >4100mm

		Speed [kph] at maximum power(*)																		
		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
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	4.7	5.6	6.8	8.1	9.9	11.8	14.1	16.9	21.3	25.5	31.0	37.0	45.0	53.7	64.4	76.7	5.0	6.0
		4.229	4.2	5.0	6.1	7.3	8.8	10.6	12.6	15.1	19.1	22.8	27.8	33.2	40.4	48.1	57.8	68.8	4.5	5.3
		5.009	3.5	4.2	5.1	6.1	7.5	8.9	10.7	12.8	16.1	19.3	23.4	28.0	34.1	40.6	48.8	58.0	3.8	4.5
		5.558	3.2	3.8	4.6	5.5	6.7	8.0	9.6	11.5	14.6	17.4	21.1	25.3	30.7	36.6	43.9	52.3	3.4	4.1
		6.095	2.9	3.5	4.2	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
		6.588	2.7	3.2	3.9	4.7	5.7	6.8	8.1	9.7	12.3	14.7	17.8	21.3	25.9	30.9	37.1	44.1	2.9	3.4

(*) Max 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, etc..
ZF NH/1c	0,91/1,09:1	1000	For tipping unit pumps, unit pumps for concrete, pumps for cranes, etc.
ZF NH/4c	1,17/1,40:1	430	For tipping unit pumps, etc.
ZFN221/10bpl+N353/1c	1,75/2,09:1+0,91/1,09:1	560+600	double PTO for concrete pumps



CLUTCH

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

On request: Ceramic clutch 17"



TRANSFER

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

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

Front/rear torque distribution ratio: 1:4,0



AXLES

FRONT

Steering cast iron type; with double reduction, central with bevel pinion-crown, lateral by means of epicycloid assembly in wheel hubs.

On request: Kessler front axle.

Version	Weight on 1 st axle	Available axle ratio	Pneus
HD9 K	8 t @ 90Km/h	5,01; 5,47; 5,96; 6,28	13 R22.5; 12.00R20; 14.00 R20

REAR:

Two drive axles in tandem with double reduction, central by bevelled pair and final by epicycloid group in wheel hubs.

The intermediate axle is fitted with distributor that distributes torque between the two axles Lockable differential by pneumatic control from driver seat. The tandem is anchored to the chassis by silent block mounted torque arms.

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

10t

FRONT AXLE G.V.W. 10t

Kessler front axle for a Gross Vehicle Weight of 10,000 Kg. Parabolic springs 5 leaves size 24x90 mm. Hydraulic power steering ZF 8099 with variable ratio 1:22.2/1:26.2.

Tyres combination subject to approval of Astra Technical Office. Maximum speed 70 Km/h.

Available axle ratios: 1: 5,01; 1: 5,47; 1: 5,96; 1: 6,28.



SUSPENSIONS

FRONT

Parabolic leaf springs with bushings, 4 leaves 24x90 mm, with shock absorbers and standard stabiliser bar.

On request:

Reinforced parabolic springs, n° 5 leaves 24x90 mm.

REAR

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

On request:

Stabiliser bar on 2nd axle.

Stabiliser bar on 3rd axle.

Extra-reinforced conventional springs, 10 leaves 25x100 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.

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 2nd and 3rd axles, toolbox.

On request:

Rapid attachment for compressed air for tyres' inflation.

Rear manoeuvring hook.

Fixed 3½" fifth wheel.

Swivelling 3½" fifth wheel.

Front bumper climbing step.

Side winch for spare wheel.



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).



STEERING

Hydraulic power steering ZF 8098 with variable ratio 1:22.2/1:26.2 with auxiliary cylinder.

Steering linkage with self lubricating floating 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
13 R 22,5 156/150G 12 00 R 20 156/150G 315/80 R 22,5 156/150G	S	D
365/85 R 20 164G(*)	S	S
365/80 R 20 160K(*) 385/65 R 22,5 158K(*)	S	
315/80 R 22,5 156/150G		D
395/85 R 20 168G(*)	S	
525/65 R 20,5 173F		S
16 00 R 20 173G(*)	S	S
16 00 R 20 163G(*)	S	
24 R 20,5 176F		S

(*) Mandatory with 9 ton front axle load.

S single

D double

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



BRAKES

Front and rear "duo-duplex" self-adjusting wedge type brakes with automatic play take-up. Total net braking surface 9.276 cm².

ABS system.

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

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 200 kW (272 HP)

HD9 440/480/540 HP braking power 295 kW (408 HP)

On request:

Hydraulic interarder (HD9 66.38T and HD9 66.42T 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 brakes system.

No ABS system.

No hydraulic interarder.



ELECTRICAL SYSTEM

Voltage: 24 V

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

Accumulators: 2 in series, 160 Ah.

Starter motor 24 V 5,5 kW.

Mechanically controlled electrical circuit breaker.

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

1 electrical joint 15-pole (ISO 12089-4091) for semi-trailer lighting.

Electrical provision for bodybuilders.

Provision for diagnostics.

Provision for radio/cb (without speakers) Glow plug for cold start.

On request:

170 Ah accumulators;

160 Ah tropicalized accumulators;

170 Ah tropicalized accumulators;

170 Ah tropicalized accumulators; Reverse alarm.



CAB

White cab built in galvanized pressed steel with hydraulic tilting up to 60°. Cab suspension with 4 helical springs with co-axial 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:

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.

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 ZF16S2220TO/ZF16S2520TO:	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



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, semi-trailer turn indicators, rotating lights, cab lifted, axles differential locked, differential lock, front brakes air pressure low, rear brakes air pressure low, semi-trailer 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, semi-trailer ABS, main steering circuit failure, steering auxiliary circuit failure.

ASTRA Veicoli Industriali

Via Caorsana, 79

29122 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