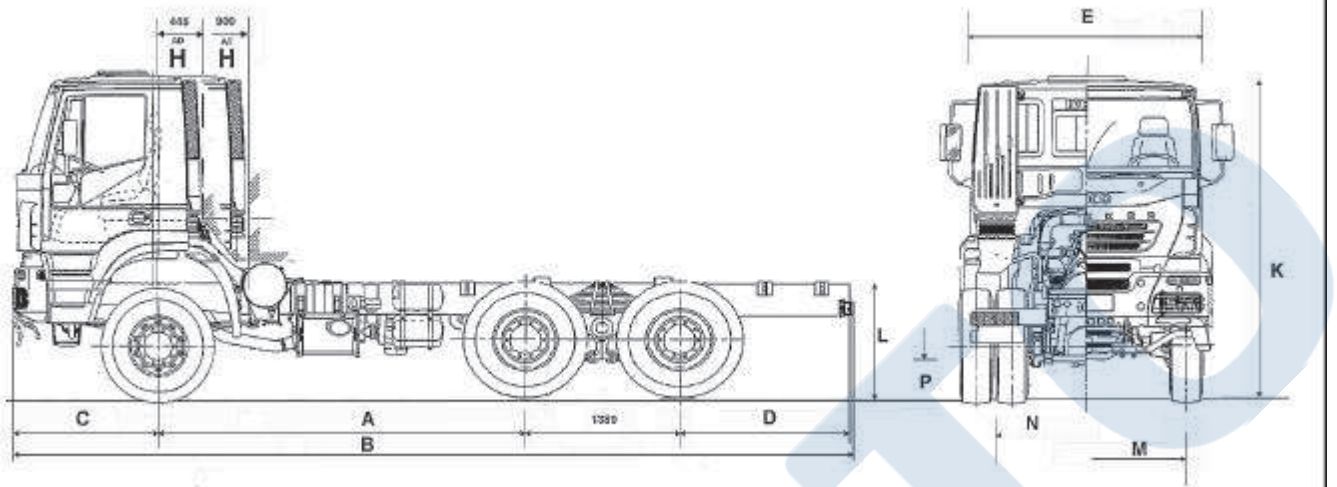


## Gearbox ZF 16S-2210D

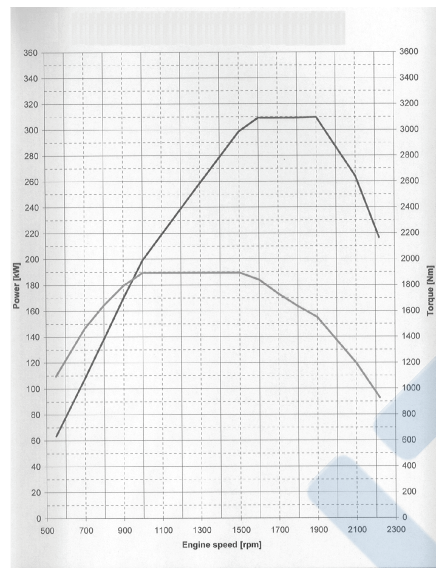
Wheelbase	Cab	Drive	Vcb
3200-1380	ADH	LEFT HAND DRIVE	K3VAK2C1
	ADH	RIGHT HAND DRIVE	K3VAK2CA
3500-1380	ADH	LEFT HAND DRIVE	K3VAK3C1
	ADH	RIGHT HAND DRIVE	K3VAK3CA
3820-1380	ADH	LEFT HAND DRIVE	K3VAK4C1
	ADH	RIGHT HAND DRIVE	K3VAK4CA
4200-1380	ADH	LEFT HAND DRIVE	K3VAK5C1
	ADH	RIGHT HAND DRIVE	K3VAK5CA
4500-1380	ADH	LEFT HAND DRIVE	K3VAK6C1
	ADH	RIGHT HAND DRIVE	K3VAK6CA


**DIMENSIONS (mm) (AU 1108-D ADH)**

	<b>3200-1380</b>	<b>3500-1380</b>	<b>3820-1380</b>	<b>4200-1380</b>	<b>4500-1380</b>
<b>A Wheelbase</b>					
B Overall length	7568	7883	8153	9143	9413
C Front overhang	1440	1440	1440	1440	1440
D Rear overhang	1495	1495	1495	2080	2080
E Max cab width	2550	2550	2550	2550	2550
H Front axle to front of body	445	445	445	445	445
K Overall height to top of cab, unladen	3132	3132	3132	3132	3132
L Frame height at end of frame, unladen	1097	1098	1099	1097	1098
M Front track	2042	2042	2042	2042	2042
N Rear track	1823	1823	1823	1823	1823
P Minimum ground clearance ( Axle2 )	304	304	304	304	304
Overall width (rear tyres)	2489	2489	2489	2489	2489
Approach angle	26°	26°	26°	26°	26°
Departure angle	22°	22°	22°	15°	15°
Ramp angle	21°	21°	21°	22°	21°
Back of cab to end of frame	5794	6109	6379	7369	7639
Turning radius wall to wall	7975	8325	8725	9200	9575
Turning radius kerb to kerb	7400	7750	8150	8625	9000
Frame height at front axle, unladen	1155	1155	1155	1155	1155
Frame height at rear axle, unladen	1115	1115	1115	1115	1115

<b>Weights (kg) (BU51006-D ADH)</b>					
<b>Wheelbase</b>	<b>3200-1380</b>	<b>3500-1380</b>	<b>3820-1380</b>	<b>4200-1380</b>	<b>4500-1380</b>
GVW - Design	33000	33000	33000	33000	33000
GTW - Design	60000	60000	60000	60000	60000
Plated weight on axle 1 - Design	7500	7500	7500	7500	7500
Plated weight on axle 2 - Design	13000	13000	13000	13000	13000
Plated weight on axle 3 - Design	13000	13000	13000	13000	13000
Max body & payload - Design	23300	23270	23220	23140	23070
Total vehicle kerbweight	9700	9730	9780	9860	9930
Total vehicle kerbweight 1	4940	4960	4985	4985	4975
Total vehicle kerbweight 2	2380	2385	2400	2440	2480
Total vehicle kerbweight 3	2380	2385	2395	2435	2475

## Engine F3B E0681V\*A ( EU 0063-D)



Name	CURSOR 13 - F3B
Position	FRONT
Cycle	DIESEL
Aspiration type	TC+AFTERCOOLER
Injection type	UNIT INJECTOR
No. of cylinders	6 IN-LINE
4 Stroke / 2 Stroke cycle	4
Total displacement cm <sup>3</sup>	12880
Bore / Stroke mm	135 / 150
Max power (1)	309 kW 420 HP 1900 rpm
Specific fuel consumption-max power	222 g/kWh
Max torque (2)	194 kgm 1900 Nm 900 ÷ 1485 rpm
Specific fuel consumption-max torque	190 g/kWh
Power loss	0% every 100 m up to 1500 m sea level
Dry weight kg	1006
Oil capacity kg	35
Crankshaft supported by	7 Bearings
Injection pump governor type	EDC
Cooling system	WATER
Hydraulic steering pump	
Cold starting type	THERMOSTARTER
Type of turbocharging	WITH WASTE GATE VALVE
Emissions according regulations	EURO 2 ( EURO 3 as option )

**Engine F3B E0681V\*A (EU 0063-D)**

The central electronic system controls the following functions:

Turbocharger with "waste gate", injection control, engine brake, speed control, cruise control, data exchange with ASR (anti-slip) control.

**Fuelling (ABU 0008-D)**

No. of tanks	1
Material	STEEL
Total tank capacity l.	300
Fuel pump	
Prefilter	
Filter	
Fuel separator	

**Air intake (AC 0001-D)**

Filter type	DRY
Snorkel position	BEHIND THE CAB ON THE LEFT
Air intake	WITH SNORKEL

**Cooling (AD 0001-D)**

Cooling system	WATER
Fan type	VISCOSTATIC

**Clutch 17" (FU 0002-D)**

Type	SINGLE DRY PLATE
Actuation	PULL TYPE
Release control	HYDRAULIC
Adjustment	AUTOMATIC

**Gearbox ZF 16S-2210D (GU 0044-D)**

Type	SYNCHROMESH
Installation	ENGINE FLANGED
Control	MANUAL DOUBLE H
No. of gears (.....reverse)	16+2
Casing material	ALUMINIUM
Gearbox opening	16.43
Possible P.T.O. installation	

**Gear ratios**

1st	13.80
2nd	11.54
3rd	9.49
4th	7.93

**Gear ratios**

5th	6.53
6th	5.46
7th	4.57
8th	3.82
9th	3.02
10th	2.53
11th	2.08
12th	1.74
13th	1.43
14th	1.20
15th	1.0
16th	0.84
Rev. 1st	12.92
Rev. 2nd	10.80

**Front steering axle (LU 0023-D)**

Identification	5886/2D
Type	RIGID
Beam section	"I"

**1st rear drive axle (MU 0051-D)**

Identification	453291/2D
Type	RIGID
Hub reduction ratio	3.2
Axle	TANDEM
Wheel arrangement	TWIN
Axle housing material	CAST IRON
Oil capacity kg	27
Reduction type	HUB REDUCTION

**2nd rear drive axle (MU 0051R-D)**

Identification	453291/2D
Type	RIGID
Hub reduction ratio	3.2
Axle	TANDEM
Wheel arrangement	TWIN
Axle housing material	CAST IRON
Oil capacity kg	16
Reduction type	HUB REDUCTION

**Suspensions (NU 0036-D)**

Front steering axle	SEMIELLIPTIC SPRINGS
1st rear drive axle	SEMIELLIPTIC SPRINGS
2nd rear drive axle	IN COMMON WITH THE SECOND AXLE

**Main features**

Axle no.	1	2
Leaf width (mm)	90	100
Main leaf spring length (mm)	1900	1480
No. of main leaves spring	9	13

**Shock absorber (PU 0003-D)**

Shock absorber no. (front)	2
Shock absorber type	HYDRAULIC TELESCOPIC

**Anti-roll bars (OU 0001-D)**

Position	FRONT AXLE
Type	TORSION BAR

**Wheels (QU 0004-D)**

Wheel type	DISC
Wheel material	STEEL
Wheel dimensions	20-8.5

**Tyres (RU 0050-D)**

Tyre dimensions	12.00 R 20 18PR
Load-index	154/150
Speed index	K = 110 Km/h
Rolling radius mm	545
Rolling circumference mm	3422

<b>Axle</b>	<b>Mounting</b>
1	SINGLE
2	TWIN

**Steering 8098 (KU 0002-D)**

Type	HYDRAULIC
Adjustment type	HEIGHT + STEERING WHEEL ANGLE
Steering wheel diameter (mm)	500
No of parts in steering column	2

**Chassis (mm) (JU 0155-D)**

Frame section	DOUBLE JOGGLE
Front crossmember fixing	BOLTED
Middle crossmember fixing	RIVETED
Rear crossmember fixing	BOLTED

Wheelbase	<u>3200-1380</u>	<u>3500-1380</u>	<u>3820-1380</u>
Side member material	STEEL	STEEL	STEEL
Side member section	"C"	"C"	"C"
Flange thickness	10	10	10
Web thickness	10	10	10
Upper flange width	80	80	80
Lower flange width	80	80	80
Side member max. height	309	309	309
Frame width at rear	776	776	776

Wheelbase	<u>4200-1380</u>	<u>4500-1380</u>
Side member material	STEEL	STEEL
Side member section	"C"	"C"
Flange thickness	10	10
Web thickness	10	10
Upper flange width	80	80
Lower flange width	80	80
Side member max. height	309	309
Frame width at rear	776	776



**Brakes (SU 0212-D)**

Air dryer

Air dryer

Auxiliary brake / Engine brake      DECOMPRESSION ENGINE BRAKE

Emergency brake      COMBINED WITH PARKING BRAKE

Parking brake      MECHANICAL WITH SPRING CYLINDER

Service brake      AIR

Parking brake axle(s)      REAR AXLE(S)

Total tank capacity l.      100

Air compressor displacement cm<sup>3</sup>      352

Air compressor      SINGLE CYLINDER

Air tank material      STEEL

Brake standards      EEC

No. of circuits      2

Number of air tanks      5

Axle no.	Axle 1	Axle 2	Axle 3
Brake type	DRUM (Duo-Duplex)	DRUM (Duo-Duplex)	DRUM (Duo-Duplex)
No. of cylinders	4	4	4
Brake cylinder diameter (sqin)	16	16	16
Drum diameter (mm)	410	410	410
Friction area cm <sup>2</sup>	2884	3220	3220
Linings width (mm)	180	200	200

**Electrics (VU 0033-D)**

Voltage V      24

Alternator power V/A      28/90

No. of batteries      2

Battery voltage V      12

Battery capacity Ah      170

Starter motor power kW      5

**Lighting (WU 0003-D)**

No. of headlights      2

Type of lamps      HALOGEN

Front parking lights

Rear lights

Front side marker lights

**Lighting (WU 0003-D)**

Reverse lights

Hazard lights

Number plate lights

Rear fog light(s)

Side lights

Rear marker lights

Stop lights

Front direction indicators

Side direction indicators

Rear direction indicators

Rear cab lighting

Provision for front fog lights

**Cab ADH (YU 0025AD-)**

Cab type FORWARD CONTROL

Version DAY CAB

Material STEEL

No of steps 3

Tilting device HYDRAULIC

Tilt angle 60°

Front doors type SIDE HUNG

Window operation (front) MANUAL ON RIGHT - MANUAL ON LEFT

Roof type LOW

Roof material PLASTIC

Windscreen type LAMINATED

Windscreen ONE PIECE - CURVED

Windscreen according to standards: EEC/USA

No. of windscreen wipers 2

No. of windscreen wiper speeds 2

Side windows

Rear view mirrors no. 2

Mirror control MANUAL

Kerbside approach mirror

No. of places 2

Driver seat type SINGLE

Driver seat adjustment HEIGHT, LONGITUDINAL AND BACK INCLINATION

Passenger seat(s) type SINGLE

Passenger seat adjustment HEIGHT, LONGITUDINAL AND BACK INCLINATION

No. of fan speeds 4

Provision for belts

**Cab ADH (YU 0025AD-)**

Remarks:

Doors with plastic covering, storage compartments, defrost system for door windows, arm rest.

Corrosion protection, underseal and cavity sealing with wax.

Driver's seat:

Head rest, plastic covering.

Passenger's seat:

Head rest, plastic covering.

Roof panel:

Prearrangement for revolving roof lamp.

Floor:

Removable mats.

Interior equipment:

storage compartments (passenger side), interior light, 2 spotlights (steps lighting), 2 sun visors.

Central console:

adjustable air vents, ash-tray, lighter / 24 V, heating control, 12 V socket, small storage compartment.

Exterior equipment:

Front bumper with steps, mudguard, front grille, side spoilers as splash protection, mudflaps, external engine starter (when cab is tilted) including safety device.

**In cab equipment (TU 0019-D)****Warning lights**

High beam

Direction indicators

Direction indicators (trailer)

Hazard lights

External lights

Low ranges

Limiter failure

Longitudinal differential

Front transversal differential

Rear transversal differential lock

Hand brake on

ASR

Brake failure

Brake failure (trailer)

Engine preheating

Power take off

Water in fuel separator

Water in fuel prefilter

Clogged air filter

Cab lockdown unlocked

**Warning lights**

Battery charge

Hydraulic steering power failure

Hydraulic steering power failure no. 2 (8 x 4 only)

ABS failure

ABS failure (trailer)

EDC

Retarder

Auxiliary heating

Clogged engine oil filter

Engine brake

**Warning lights prearrangement**

Tipper in tipping position

**Equipment prearrangement**

IVECO Control

**Switches**

External lights

Hazard lights

Rear fog lights + warning light

Lamp tester

Rear cab light

Headlamp wipers

Fog lights

Additional lights

Engine diagnosis Blink Code

Engine brake

**Instruments**

Rev counter

Air brakes pressure gauge

Engine oil pressure gauge + warning light

Tachograph (1driver)

Water temperature indicator

Fuel gauge

Socket

Oil level gauge and indicator lamp

**Multifunction stalk**

Horn

High beam

Headlamp flash

Indicator lights

Windscreen wiper with intermittent wipe

Cruise control speed memory

**Multifunction stalk**

Cruise control speed set

## Remarks:

- \* inter-axle differential: models 6x4, 8x4 only
- \* Front transversal differential: models "W" only
- \* Hydraulic steering power failure (no. 1): models 8x4 only
- \* Hydraulic steering power failure (no. 2): models 8x4 only

P.T.O./intersection line for body builders with regard to engine electronics in central electrics.

Central electric box with flap on passenger's side, usable as table and cup holder

Tool box.

**Miscellaneous (XU 0047-D)**

Jack

Front towing hitch

Exhaust pipe position: left side for LHD - right side for RHD

Rear crossmember for trailer coupling D = 130 kN

**Drawings (DUAD0727-D)**

Wheelbase	<b>3200-1380</b>	<b>3500-1380</b>	<b>3820-1380</b>
Left hand drive vehicle drawing	41840353	41840354	41840355
Right hand drive vehicle drawing	41840353	41840354	41840355
Day cab frame drawing	41300084	41300085	41300086
Wheelbase	<b>4200-1380</b>	<b>4500-1380</b>	
Left hand drive vehicle drawing	41840356	41840357	
Right hand drive vehicle drawing	41840356	41840357	
Day cab frame drawing	41300087	41300290	

**Gearbox** ZF 16S-2210D  
**Tyres** 12.00 R 20 18PR

			Max. gradient %									
Rear axle ratio	Gearbox ratio	Max. speed Km/h	GVW					GTW				
			24	28	29	33	37.2	40	44	60		
4.227	1 - 13.80	6.7	100,0	88,0	82,0	67,0	57,0	51,0	46,0	32,0		
	16 - 0.84	109.9	3,9	3,2	3,1	2,7	2,3	2,1	1,9	1,2		
4.666	1 - 13.80	6.1	100,0	100,0	99,0	78,0	65,0	59,0	52,0	35,0		
	16 - 0.84	99.5	4,4	3,7	3,6	3,1	2,6	2,4	2,1	1,4		
5.008	1 - 13.80	5.6	100,0	100,0	100,0	88,0	72,0	65,0	57,0	38,0		
	16 - 0.84	92.8	4,8	4,1	3,9	3,4	2,9	2,7	2,4	1,6		
5.558	1 - 13.80	5.1	100,0	100,0	100,0	100,0	86,0	76,0	66,0	44,0		
	16 - 0.84	83.6	5,5	4,6	4,4	3,8	3,3	3,1	2,7	1,8		
6.096	1 - 13.80	4.6	100,0	100,0	100,0	100,0	100,0	89,0	76,0	49,0		
	16 - 0.84	76.2	6,1	5,2	5,0	4,3	3,7	3,4	3,1	2,1		
6.589	1 - 13.80	4.3	100,0	100,0	100,0	100,0	100,0	100,0	86,0	54,0		
	16 - 0.84	70.5	6,7	5,7	5,4	4,7	4,1	3,8	3,4	2,3		

**Gearbox** ZF 16S-2210D  
**Tyres** 12.00 R 24

			Max. gradient %									
Rear axle ratio	Gearbox ratio	Max. speed Km/h	GVW					GTW				
			24	28	29	33	37.2	40	44	60		
4.227	1 - 13.80	7.3	99,0	75,0	71,0	59,0	50,0	46,0	41,0	29,0		
	16 - 0.84	120	3,5	2,9	2,8	2,4	2,0	1,9	1,6	1,0		
4.666	1 - 13.80	6.6	100,0	89,0	84,0	68,0	57,0	52,0	46,0	32,0		
	16 - 0.84	108.7	4,0	3,3	3,2	2,7	2,4	2,2	1,9	1,2		
5.008	1 - 13.80	6.2	100,0	100,0	96,0	76,0	63,0	57,0	51,0	35,0		
	16 - 0.84	101.3	4,4	3,7	3,5	3,0	2,6	2,4	2,1	1,4		
5.558	1 - 13.80	5.6	100,0	100,0	100,0	91,0	74,0	66,0	58,0	39,0		
	16 - 0.84	91.2	5,0	4,2	4,0	3,4	3,0	2,7	2,4	1,6		
6.096	1 - 13.80	5.1	100,0	100,0	100,0	100,0	87,0	77,0	66,0	44,0		
	16 - 0.84	83.2	5,5	4,7	4,5	3,9	3,4	3,1	2,8	1,9		
6.589	1 - 13.80	4.7	100,0	100,0	100,0	100,0	100,0	87,0	75,0	48,0		
	16 - 0.84	77	6,1	5,1	4,9	4,3	3,7	3,4	3,0	2,1		

**Gearbox** ZF 16S-2210D  
**Tyres** 13 R 22.5

			Max. gradient %									
Rear axle ratio	Gearbox ratio	Max. speed Km/h	GVW					GTW				
			24	28	29	33	37.2	40	44	60		
4.227	1 - 13.80	6.7	100,0	88,0	83,0	67,0	57,0	52,0	46,0	32,0		
	16 - 0.84	109.5	3,9	3,3	3,1	2,7	2,3	2,1	1,9	1,2		
4.666	1 - 13.80	6	100,0	100,0	100,0	79,0	65,0	59,0	52,0	36,0		
	16 - 0.84	99.2	4,4	3,7	3,6	3,1	2,7	2,4	2,2	1,4		
5.008	1 - 13.80	5.6	100,0	100,0	100,0	89,0	73,0	65,0	57,0	39,0		
	16 - 0.84	92.4	4,9	4,1	3,9	3,4	2,9	2,7	2,4	1,6		
5.558	1 - 13.80	5.1	100,0	100,0	100,0	100,0	87,0	77,0	66,0	44,0		
	16 - 0.84	83.3	5,5	4,6	4,5	3,8	3,3	3,1	2,7	1,8		
6.096	1 - 13.80	4.6	100,0	100,0	100,0	100,0	100,0	90,0	76,0	49,0		
	16 - 0.84	75.9	6,1	5,2	5,0	4,3	3,8	3,4	3,1	2,1		
6.589	1 - 13.80	4.3	100,0	100,0	100,0	100,0	100,0	100,0	87,0	54,0		
	16 - 0.84	70.2	6,7	5,7	5,5	4,7	4,1	3,8	3,4	2,3		

**Gearbox** ZF 16S-2210D  
**Tyres** 315/80 R 22.5

			Max. gradient %									
Rear axle ratio	Gearbox ratio	Max. speed Km/h	GVW					GTW				
			24	28	29	33	37.2	40	44	60		
4.227	1 - 13.80	6.4	100,0	95,0	89,0	72,0	60,0	54,0	48,0	33,0		
	16 - 0.84	105.3	4,1	3,4	3,3	2,8	2,4	2,2	2,0	1,3		
4.666	1 - 13.80	5.8	100,0	100,0	100,0	84,0	69,0	62,0	55,0	37,0		
	16 - 0.84	95.3	4,7	3,9	3,8	3,2	2,8	2,6	2,3	1,5		
5.008	1 - 13.80	5.4	100,0	100,0	100,0	96,0	77,0	69,0	60,0	40,0		
	16 - 0.84	88.8	5,1	4,3	4,1	3,5	3,1	2,8	2,5	1,7		
5.558	1 - 13.80	4.9	100,0	100,0	100,0	100,0	93,0	82,0	70,0	46,0		
	16 - 0.84	80	5,8	4,9	4,7	4,0	3,5	3,2	2,9	1,9		
6.096	1 - 13.80	4.4	100,0	100,0	100,0	100,0	100,0	97,0	81,0	52,0		
	16 - 0.84	73	6,4	5,4	5,2	4,5	3,9	3,6	3,2	2,2		
6.589	1 - 13.80	4.1	100,0	100,0	100,0	100,0	100,0	100,0	93,0	57,0		
	16 - 0.84	67.5	7,0	5,9	5,7	4,9	4,3	4,0	3,6	2,4		