

IVECO **T-WAY**

TECHNICAL DESCRIPTION



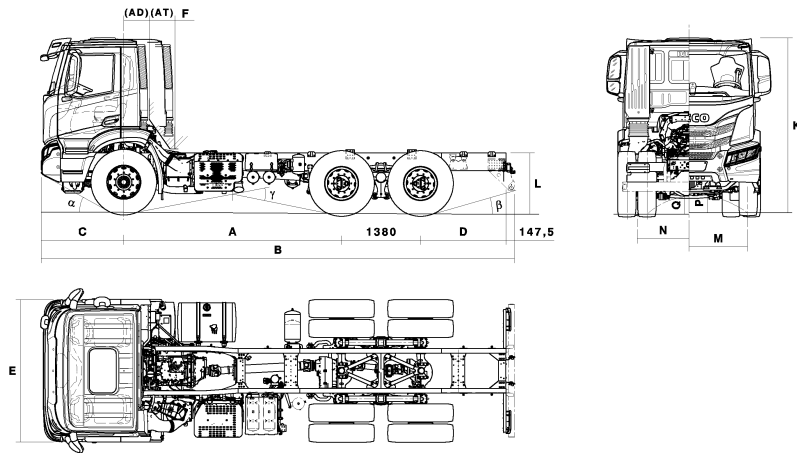
AT380T45 - Chassis cab 6x4

IVECO

LIST OF LINKED VCB

VCB code	Gearbox	Wheelbase	Cabin	Drive
TFBID1B2	I6S 2220 TO	3300	AT-SX	LH
TFBID1D2	I6TX 2240 TO	3300	AT-SX	LH
TFBID2B2	I6S 2220 TO	3500	AT-SX	LH
TFBID2D2	I6TX 2240 TO	3500	AT-SX	LH
TFBID3B2	I6S 2220 TO	3800	AT-SX	LH
TFBID3D2	I6TX 2240 TO	3800	AT-SX	LH
TFBID4B2	I6S 2220 TO	4200	AT-SX	LH
TFBID4D2	I6TX 2240 TO	4200	AT-SX	LH
TFBID5B2	I6S 2220 TO	4500	AT-SX	LH
TFBID5D2	I6TX 2240 TO	4500	AT-SX	LH

DIMENSIONS & WEIGHTS



DIMENSIONS (MM)

Wheelbase (A)	3300 1380	3500 1380	3800 1380	4200 1380	4500 1380
Max length (B)	7501	7996	8266	8311	9436
Max width over wings (cab) (E)	2550	2550	2550	2550	2550
Front axle to back of cab - including filter (F)	445	445	445	445	445
Frame height at end of frame, unladen (L)	1167	1168	1167	1164	1168
Frame height at front axle, unladen	1105	1105	1104	1102	1102
Frame height at rear axle, unladen	1147	1147	1147	1147	1146
Front overhang (C)	1440	1440	1440	1440	1440
Rear overhang (D)	1225	1495	1495	1135	1585
Minimum ground clearance (front) (P)	337	337	337	337	337
Minimum ground clearance (rear) (Q)	311	311	311	311	311
Overall height to top of cab, unladen (K)	3122	3122	3121	3119	3119
Turning diameter kerb to kerb	16800	17400	18100	19100	19800
Turning diameter wall to wall	18400	19000	19700	20700	21400
Front track (M)	2043	2043	2043	2043	2043
Rear track (N)	1827	1827	1827	1827	1827
Approach angle α (°)	29	28	29	29	29
Departure angle β (°)	20	16	16	21	15
Ramp angle γ (°)	22	22	22	19	22
Side members thickness	10	10	10	10	10
Side members max height	309	309	309	309	309
Side members flange width	80	80	80	80	80
Frame width at rear	776	776	776	776	776

Notes : The height of the side member includes the thickness as well.

Departure angle (β) for rear bumper option (CCP 165) compliant ECE R58 rev.02.

For compliance ECE R58.03 rear bumper option (CCP 194) is needed. Angle (β^*) reported on 2D drawings.

WEIGHTS (KG)

Wheelbase	3300 1380	3500 1380	3800 1380	4200 1380	4500 1380
Total vehicle kerb weight	9348	9384	9427	9415	9561
Kerbweight on Front Axles	5171	5175	5208	5266	5337
Kerbweight on Rear Axles	4177	4209	4219	4149	4224
G.V.W. (EC)	26000	26000	26000	26000	26000
G.V.W. (Design)	34000	34000	34000	34000	34000
Plated weight on front axle (EC)	8000	8000	8000	8000	8000
Plated weight on front axle (Design)	8000	8000	8000	8000	8000
Plated weight on rear axle(s) (EC)	19000	19000	19000	19000	19000
Plated weight on rear axle(s) (Design)	26000	26000	26000	26000	26000
Max body & payload (Design)	24652	24616	24573	24585	24439

Notes :

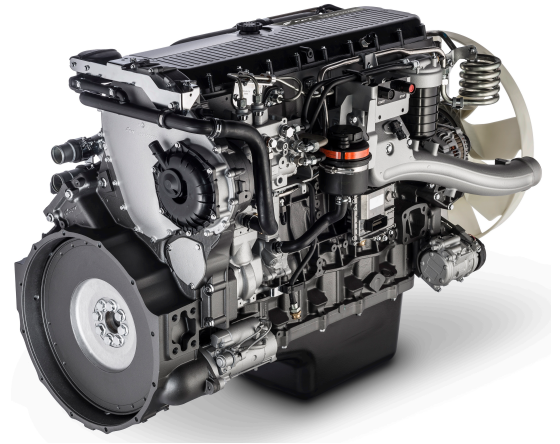
Weights are to standard configuration and include: chassis cab (or tractor), driver (75 kg), full fuel and Adblue tanks, tools kit and spare wheel (if present). The values of the plated weights / GVW can vary according to the markets and local homologations.

Wheelbase	Type	Drawing
3300 1380	Left hand drive	5802854856
3500 1380	Left hand drive	5802854857
3800 1380	Left hand drive	5802854858
4200 1380	Left hand drive	5802854859
4500 1380	Left hand drive	5802854860

MODEL COMPONENTS

ENGINE

Identification Code	F3HGE611
Manufacturer	FPT Industrial
Commercial name	Cursor 13
Cycle	DIESEL
Aspiration type	Electronic VGT
Injection type	DIRECT
No. of cylinders	6
Cylinders layout	IN-LINE
Bore mm	135
Stroke mm	150
Total displacement cm ³	12.882
Exhaust gas treatment	Hi-SCR (DOC+DPF+SCR+CUC)
Injection system	Common rail
Cold starting type	THERMOSTARTER
Type of turbocharging	eVGT
Emissions control	EURO VI D
Cooling system	water



Notes :

Hi-e SCR after-treatment :

DOC (Diesel Oxydation Catalyst): promotes oxidation of several exhaust gas components by oxygen. The oxidation of NO to NO₂ plays an important role on the performance of ATS system.

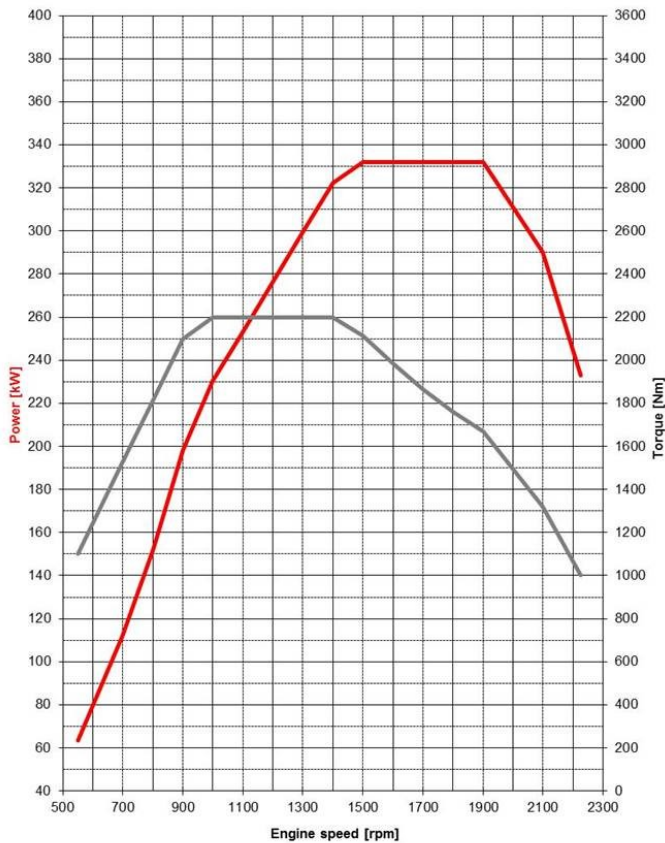
DPF (Diesel Particulate Filter): introduced in order to cut down PM and PN (Particulate numbers) before SCR catalyst , increasing the ATS system efficiency.

SCR (Selective catalytic Reduction): required to reduce NO_x through the injection of AdBlue. Urea hydrolysis and gas distribution on the SCR catalyst assure full exhaust gas flow treatment.

CUC (Clean Up Catalyst): integrated in the SCR, is required to eliminate residual ammonia (NH₃) for legislation implications.

MODEL COMPONENTS

DRIVELINE



450 C13 - Cursor 13 - 450 HP - Euro VI

Maximum power: 331 kW (450 HP) @ 1900 rpm

Maximum torque: null Kgm (2200 Nm) @ 1000 rpm

Notes : The engine complies with the EURO VI emission regulations.

ELECTRONIC VGT - Variable Geometry Turbocharger : Electronically governed VGT is standard on all the engines of cursor family. # Electronic management will assure a better power/torque delivery, according to the load factor and a better driveability and fuel consumption. # The electronic management also allows diagnosis and continuous monitoring activities that ensure a correct turbocharger functioning.

ELECTRONIC COMMON RAIL : Peak nozzle pressures up to 2200 bar and higher flexibility in fuel. # Multiple injection capability more precise metering and timing control for all injection events. # Optimized combustion process for high reduction of PM (particulate) into the engine. # Better performance also at low rpm, with benefits in term of torque.

GEARBOX

Gearbox model	Gearbox Type	Installation	Box material	Dry weight Kg	Clutch type	Max input torque Nm	No. of forward gears	No. of reverse gears	Shifting
16S 2220 TO	SYNCRONIZED	ENGINE FLANGED	ALUMINIUM ALLOY	304.5 - (w/o retarder)	Dry clutch	2200	16	2	HH-Coupling control
16TX 2240 TO	AUTOMATED	ENGINE FLANGED	ALUMINIUM	290 - (w/o retarder)		2200	16	2	

GEAR RATIOS

Gearbox model	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	rev. 1st	rev. 2nd
16S 2220 TO	13.8	11.54	9.49	7.93	6.53	5.46	4.57	3.82	3.02	2.53	2.08	1.74	1.43	1.2	1.00	.84	12.92	10.8
16TX 2240 TO	14.68	12.05	9.92	8.14	6.78	5.56	4.57	3.75	3.22	2.64	2.17	1.78	1.49	1.22	1.00	0.82	14.14	11.61

CLUTCH

Gearbox model	Type	Outer diameter mm	Outer diameter (inches)
16S 2220 TO	Single dry plate	430	17
16TX 2240 TO	Single dry plate	430	17

MODEL COMPONENTS

TYRES & WHEELS

Code	Tyres	Front	Rear	Dynamic Radius m	Rolling resistance Coefficient	Load index	Speed index	Rolling circumference m
20081	Standard	13R22,5	13R22,5	.54	.007	156/150	G = 90 KM/H	3.428
20885	Optional	385/65R22,5	315/80R22,5	.522	.006	156/150	K = 110 KM/H	3.278
20795	Optional	315/80R22,5	315/80R22,5	.522	.006	156/150	L = 120 KM/H	3.278
20079	Optional	13R22,5	13R22,5	.543	.0072	156/150	K = 110 KM/H	3.41
20790	Optional	315/80R22,5	315/80R22,5	.522	.006	156/150	L = 120 KM/H	3.282

REAR AXLE RATIO

Option code	05003	06017 *	06019	06021	06032	06034	06036
Ratio	6.096	4.227	4.67	5.01	3.792	5.56	6.57

*: Standard axle ratio

PERFORMANCE

* Max Speed. Calculated speed on the basis of engine rpm and axle ratios. Real speed limits must take into account the speed index of the tyres: K = 110 km / h L = 120 km / h M = 130 km / h

** Theoretically calculated values, arising from the engine torque without considering the road-friction values and the stability limits of the vehicles. When calculating with more than one tyres or more than one axle ratio, availability of each combination must be checked.

Speed and gradeability values are rounded.

A = Total Weights (solo vehicle) Kg - Max Gradeability %

B = Total Weights (vehicle+trailer) Kg - Max Gradeability %

Tyre: 20081 - 13R22.5 TYRES - Regional / Works **Efficiency: 0.91** **No transfer box**

Gearbox model I6S 2220 TO

Axle Ratio	Gear Ratio 1°	Gear Ratio 16°	Speed km/h 1°	Speed km/h 16°	RPM at 80 km/h	RPM at 90 km/h	A		B	
							26000		40000	
							1°	16°	1°	16°
3.792	13.8	0.84	7.47	122.69	1252	1408	100.00	3.52	55.82	2.04
4.227	13.8	0.84	6.70	110.06	1395	1570	100.00	4.14	64.85	2.44
4.67	13.8	0.84	6.06	99.62	1542	1734	100.00	4.74	75.37	2.83
5.01	13.8	0.84	5.65	92.86	1654	1861	100.00	5.19	84.68	3.13
5.56	13.8	0.84	5.09	83.67	1835	2065	100.00	5.91	100.00	3.59
6.096	13.8	0.84	4.65	76.32	2012	2264	100.00	6.60	100.00	4.04
6.57	13.8	0.84	4.31	70.81	2169	2440	100.00	7.20	100.00	4.43

Gearbox model I6TX 2240 TO

Axle Ratio	Gear Ratio 1°	Gear Ratio 16°	Speed km/h 1°	Speed km/h 16°	RPM at 80 km/h	RPM at 90 km/h	A		B	
							26000		40000	
							1°	16°	1°	16°
3.792	14.68	0.82	7.02	125.68	1222	1375	100.00	3.39	60.71	1.96
4.227	14.68	0.82	6.30	112.75	1362	1532	100.00	4.00	71.06	2.35
4.67	14.68	0.82	5.70	102.05	1505	1693	100.00	4.59	83.45	2.74
5.01	14.68	0.82	5.31	95.12	1614	1816	100.00	5.03	94.77	3.02
5.56	14.68	0.82	4.79	85.72	1792	2016	100.00	5.74	100.00	3.48
6.096	14.68	0.82	4.37	78.18	1964	2210	100.00	6.41	100.00	3.92
6.57	14.68	0.82	4.05	72.54	2117	2382	100.00	7.01	100.00	4.30

FRONT BUMPER

Steel front bumper

DISC BRAKES

Disc brakes allround

Electronic braking system (EBS)

Brake Assist System (BAS)

ESP with OFF ROAD MODE available as option

AXLES

Position	Description
Front	5890/D OFF - Axle drop: 72 mm
Rear	453291_ADB - Tandem Hub Reduction (Disc Brakes)

MODEL COMPONENTS

SUSPENSIONS

Front parabolic suspension (Semi elliptic option)
Standard capacity: 8.000 kg. (options for 8.500 kg and 9.000 kg.)

Rear cantilever suspension (Semi elliptic option)
Capacity: 26.000 kg.

CANTILEVER REAR SUSPENSION

Shock absorbers

Shock absorbers type

HYDRAULIC TELESCOPIC

BATTERY

Electrics

Voltage V	24
Alternator power V/A	28 / 90
Starter power kW	5.5
No. of batteries	2
Batteries capacity V/Ah	12 / 170

FUEL TANK

Fuelling

Capacity (l.)	290
Material	Aluminium

UREA TANK

Adblue tank

Capacity (l.)	50
Material	Plastic

MODEL COMPONENTS

MISCELLANEOUS

THE AVAILABILITY OF THE FOLLOWING OPTIONS DEPENDS ON VERSIONS AND MARKETS :

SAFETY :

TPMS (on cluster): Tyre Pressure Monitoring System is an electronic system which monitors the air pressure inside a tyre and provides information on faults in real time to the driver. In addition to improving vehicle safety, **TPMS** helps the driver plan tyre maintenance and contributes to reducing fuel consumption.

ESP: Electronic Stability Program (ESP).

The **ESP** system acts in skidding phase, by adjusting the engine power and braking on individual wheels with different intensities so as to stabilise the position of the vehicle. It is effective both in case of sudden deviations from the trajectory and in correcting situations of oversteer or understeer, which may occur in case of incorrectly approaching a bend.

LDWS: Lane Departure Warning System

(LDWS). The Lane Departure Warning System beeps when the vehicle strays from the lines that mark the driving lane without the indicators being activated. The system is very effective in preventing accidents due to distraction or sleepiness.

FUEL CONSUMPTION OPTIMIZATION:

ECOSWITCH: Designed to reduce fuel consumption, **ECOSWITCH** is an important aid for the driver. It activates the "iEco program" in order to optimise gear shifting strategy and performance according to actual vehicle weight, assuring the best productivity under any operating condition.

ECO ROLL: On all type of incline (also on moderate one), the eco-roll function serves to open the driveline and retain the kinetic energy of the vehicle for longer or to slightly increase it by reducing the engine-drag torque that affects the impellers. If the vehicle subsequently slows down, the engine must increase the injected fuel quantity at a later point. Driver actions during an active rolling function such as accelerator pedal, brake actuation, changing to manual, or speed range selector actuation lead to the termination of the rolling function and the closing of the driveline. Depending upon the speed range, the last gear before the rolling phase can be engaged or a new gear can be calculated and engaged when the rolling function is terminated.

ECO ROLL works in the range (50km/h ; 92km/h) and is independent from Cruise Control setting.

GPS-PREDICTIVE DRIVING (OPT Code 78878)

GPS-predictive driving is the driving strategy implemented in TraXon with predictive functionality to determine the optimal gear early for any driving situation, according to the electronic horizon information acquired via GPS by a provider and made available on the CAN bus. The electronic horizon acquires the current location of the vehicle via GPS and determines the route from topographical street maps (uphill gradient, curves, max permissible speed). GPS-predictive driving is used to improve the gear shifting and Eco-rolling strategy.

DRIVEABILITY :

ROCKING MODE (OPT Code 78507) TRAXON provides a Rocking function to have the clutch reating directly to accelerator pedal movements for rocking the vehicle out of a depression in the terrain in low grip conditions. When the Rocking mode is activated, it is possible to disengage the clutch immediately by releasing the accelerator pedal, roll back the vehicle and engage the clutch immediately again by depressing the accelerator pedal. The HMI provided for the Rocking mode includes: a dedicated switch to let the driver activate / deactivate the Rocking mode. A specific indication on the Instrument Cluster to inform when the Rocking function is active ("ROCK" indication in the transmission modes area).

OFF-ROAD MODE is an high mobility function with which the gearshifting logic allows higher rpms before shifting to faster gears, thus providing higher engine power and torque.

CREEPING MODE is an high mobility function with which the vehicle moves forward at minimum speed, simply by releasing the service brake pedal, useful for precise maneuvering operations at low speed (active via Quick Menu).

Hi-TRACTION system provides additional **hydraulic front-wheel traction** when needed, as potential consequence of slipping conditions of the rear axle. The driver pre-activates the function through a **switch in the dashboard**, making the system ready to automatically engage/disengage, in case of additional front traction required. The hydraulic traction is in any case automatically disengaged over 22 Km/h speed.



Body Builders Management
Lungo Stura Lazio, 49
10156 Turin (Italy)
Email: ibb@iveco.com

IVECO