

# Xcient GT 6x4 Dump

## 1. Dimension, Weights Specification

Vehicle Type	6x4 Dump		
Cab Type	Sleeper Cab		
Roof Height	Standard		
Wheel Base	MEDIUM		EXTRA LONG
Drive System	LHD, 6x4		
Application Engines	POWERTEC 440		

### Dimensions (mm)

Wheel Base	5,200 (3,850 + 1,350)		5,650 (4,300 + 1,350)
Overall	Length	8,315	8,765
	Width	2,490	2,490
	Height	3,325	3,325
Wheel Tread	Front	2,060	2,060
	Rear	1,825	1,825
Overhang (Body)	Front	1,595	1,595
	Rear	1,525	1,525
Overhang (Frame)	Front	1,385	1,385
	Rear	1,110	1,110
Angle	Approach	25.0	25.0
	Departure	19.6	19.6
Min. Ground Clearance	260		260

### Weight (kg)

Chassis Cab Weight		10,400	10,420
	Front	4,800	5,100
	Rear	5,600	5,320
Max. Gross Vehicle Weight *		35,100	35,100
	Front	7,500	7,500
	Rear	27,600	27,600

\* Max. GVW includes the front & rear axle loads based on the permissible tire load. / Max. GVW may vary according to rear axle(Single, Hub) and tire(12.00R20, 315/80R22.5, 295/80R22.5, 12R22.5)

## 2. Performance Specification

### Calculated Performance

Model	D6CL44				D6CK44				D6CM44			
	Medium / Extra Long				Medium / Extra Long				Medium / Extra Long			
Transmission	T230S12				ZF16S2230TO							
Final Reduction Gear	Type	Single Reduction		Hub Reduction		Single Reduction		Hub Reduction				
	G/Ratio	4.111	4.444	5.73	6.29	3.417	3.667	5.27	5.73			
Max. Speed	km/h		110.5	102.2	79.3	72.2	120.0	115.0	80.0	73.6		
Max. Gradeability	@GVW : (Single) 33100kg (Hub) 35100kg	tan $\theta$	0.558	0.604	0.735	0.808	0.521	0.559	0.759	0.826		
Min. Turning Radius	m		7.5 / 9.0		7.5 / 9.0		7.5 / 9.0		7.5 / 9.0			

\* Min. Turning Radius Calculated Base on Front Wheel Outer Tire Center Line

## 3. Chassis Specification (1/3)

### Engine

Model		D6CL44	D6CK44	D6CM44
Type		Turbo Charger Intercooler 4 stroke-cycle, water-cooled, direct-injection diesel engine		
Number of Cylinder		6 in-line		
Piston Displacement (cc)		12,742		
Bore x Stroke (mm)		130X160	130X160	130X160
Compression Ratio		17.2 : 1		
Max. Power * (ps/rpm)	Euro III	440 / 1800	-	-
	Euro IV	-	440 / 1800	-
	Euro V	-	-	440 / 1800
Max. Torque * (kg.m/rpm)	Euro III	214 / 1200	-	-
	Euro IV	-	214 / 1200	-
	Euro V	-	-	214 / 1200
Exhaust Gas After Treatment System		-	EGR +PMC	EGR +PMC
Cooling System	General	Water cooling type with thermostat, forced circulations by centrifugal pump		
	Cooling fan	Suction Type		
	Radiator	Louver fin and tube type with pressure cap and condenser tank		
Electrical System	Battery	24V-165AH-MF(STD) / 24V-180AH-MF(OPT)		
	Alternator	24V-90A		
	Starter	24V-6.0kw		
Fuel System	Injection pump	Delphi EUI System		
	Governor	included to ECU		
Oil System	Lubrication	Forced lubrication by gear pump		
	Oil grade	API service classification CF-4 above	API service classification CI-4 above	API service classification CI-4 above
Air cleaner		Dry paper element		
Valve System		Single overhead camshaft, Four valves per cylinder		

### Clutch

Type	Single Dry plate, Diaphragm Pull
Facing Material	SC500 (Non-asbestos)
Facing Size(mm); Outside dia. x Inside dia.	Φ430 X Φ242

\* Max. Power and Torque of engine may vary according to each country.

### 3. Chassis Specification (2/3)

#### Transmission

Model		T230S12	ZF16S2230TO
Type		F : 12 Speed / R : 2 Speed	F : 16 Speed / R : 2 Speed
Gear Ratio	1st	12.29 / 9.57	13.80 / 11.54
	2nd	7.49 / 5.83	9.49 / 7.93
	3rd	4.57 / 3.55	6.53 / 5.46
	4th	2.69 / 2.10	4.57 / 3.82
	5th	1.64 / 1.28	3.02 / 2.53
	6th	1.00 / 0.78	2.08 / 1.74
	7th	-	1.43 / 1.20
	8th	-	1.00 / 0.84
Reverse		10.86 / 8.46	12.92 / 10.80
Gear Oil		15ℓ	15.5ℓ
T.G.S. (Transmission Gear Shift)		Cable Gear Shift (with P/Shaft)	

#### Propeller shaft

Model	HZ68
Type	Tubular, Forged steel ends
Size (diameter x Thickness)	Φ140 × 6 t

#### Rear Axle

Model	R178HT, R185HT (Single Reduction) / H120S (Hub Reduction)	
Type	Banjo Type	
Capacity (kg)	R178HT (Single): 13,000 / H120ST (Hub): 16,000	
Final Reduction Gear	Type	Single Reduction, Hypoid Gear / Hub Reduction, Sprial Gear
	G/Ratio	Single Reduction [ 3.417(ZF16S2230TO), 3.667(ZF16S2230TO), 4.111(T230S12), 4.444(T230S12) ] / Hub Reduction [ 5.27(ZF16S2230TO), 5.73, 6.29(T230S12) ]
Gear Oil	GL-5 SAE 80W90	

#### Front Axle

Type	Reverse Elliot Type "I" Beam
Capacity (kg)	8,000

#### Tire & Wheel

Tire	Tube	Front	12.00R20-18PR(Rib)
		Rear	12.00R20-18PR(Lug)
	Tubeless	Front	12R22.5-18PR(STD, Rib) / 295/80R22.5-18PR(Rib) / 315/80R22.5-18PR(Rib)
		Rear	12R22.5-18PR(STD, Lug) / 295/80R22.5-18PR(Lug) / 315/80R22.5-18PR(Lug)
Wheel *	Front	20-8.50, 22.5x8.25, 22.5x9.00	
	Rear	20-8.50, 22.5x8.25, 22.5x9.00	

\* Steel(Silver) Wheel is available with All types of Tire / Aluminum Wheel is available with 12R22.5-18PR, 295/80R22.5-18PR

### 3. Chassis Specification (3/3)

#### Brake

Service Brake	Actuation		Full Air, Dual Circuit
	Drum Brake	Front	DRUM:Φ410X200X20(Drum Inner Diameter X Lining Width X Lining Thickness)
		Rear	DRUM:Φ410X200X20(Drum Inner Diameter X Lining Width X Lining Thickness)
	Air reservoir		120(FRT 30 REAR 70 AUXILIARY 20)
	Total lining area		DRUM : 806,769(FRT:268,923 REAR 1ST : 268,923 REAR 2ND : 268,923)
Adjuster		Auto Slack adjuster	
Parking Brake	Actuation		FULL AIR BRAKE
	Size (mm)	DRUM : Drum Inner Diameter X Lining Width X Lining Thickness	
		DRUM BRAKE : FRT Φ410X200X20, REAR 1ST Φ410X200X20	
Total lining area		DRUM : 537,846(FRT:268,923 REAR 1ST : 268,923)	

\* Brake Size : Drum (Inner Diameter x Lining Width x Lining Thickness) / Disc (Rotor Effective Diameter x Pad Width x Pad Thickness)

#### Suspension

Type	Front	Rigid Type (Multi Leaf)	
	Rear	Rigid Type (Multi Leaf)	
Spring Size *	Multi Leaf	Front	Multi:1,800 X 90 X 16- 1,15-11
		Rear	Multi:1,350 X 90 X 25 -12
Stabilizer bar	Front	Φ40	
	Rear	Φ55	
Shock absorber	Oil charged type on the front & rear		

\* Spring Size : Length x Width x Thickness- Number of leaves

**Steering**

Type	4-Spoke, Ball-Nut Type, Tilt & Telescopic, Steering Column	
Steering Wheel Diameter (mm)	Power	450
Tilting Angle	40°	
Telescopic Stroke (mm)	65mm	
Overall Steering Gear Ratio	Power	23
Turning Angle	Inner	50
	Outer	36

**Air intake system**

General	Snorkel type at the rear of Cab	
Air cleaner type	Dry paper element	
Air cleaner position	Bottom of Passenger Seat	

**Fuel tank**

Capacity	400L	
Material	Steel	

**Cooling system**

Radiator	Corrugated fin type & condense tank	
	Rows of tubes	4
	Core size (mm)	858.3 X 800 X 40 (WIDTH X HEIGHT X DEPTH)
Cooling Fan	ELECTRONIC-COOL'G FAN	

**Exhaust system**

General	Conventional (horizontal) type muffler	
Tail pipe	Droptail type, blowing to chassis rearward	

**Urea tank**

Capacity	N/A	
Material	N/A	

**Frame**

Type	H type frame with channel sectional side rail & cross members, side rail is reinforced with inner stiffeners	
Main section side rail dimension (mm)	Depth x Flange x Thickness : 300 x 90 x 8 t	
Inner Stiffener (mm)	Depth x Flange x Thickness : 280 x 80 x 5 t	

**Electrical Equipments**

Head lamps	MFR Type	
Front combination lamps	Turn signal / Hazard-Amber , Position - White	
Fog lamps	White	
Rear combination lamps	Turn signal / Hazard-Amber , Tail / Stop - Red , RR FOG - Red , RR EOML - Red , RR Side marker - Amber	
License plate lamp	White	
Back-up lamp	White	

**Instruments**

Meter Cluster	Fixed Type	
Meter	Speedometer / Tachometer / Fuel & Water temperature gauge / Urea & engine oil pressure gauge / Air pressure gauge / LCD with odometer	
Warning lamps & indicators	Turn signals & Hazard / Parking brake / Oil pressure with buzzer / Door open / Charging / Main beam / Cab tilt lock with buzzer / Exhaust Brake / Preheating / Seat belt / Overheat & coolant level with buzzer / Brake air with buzzer / Low fuel	
Horn	Single, Electric Horn / Single, Roof Air Horn	

# Xcient GT 8x4 Dump

## 1. Dimension, Weights Specification

Vehicle Type	8x4 Dump		
Cab Type	Sleeper Cab		
Roof Height	Standard		
Wheel Base	MEDIUM		EXTRA LONG
Drive System	LHD, 8x4		
Application Engines	POWERTEC 440		

### Dimensions (mm)

Wheel Base	6,450 (1,990 + 3,110 + 1,350)		7,200 (1,990 + 3,860 + 1,350)	
Overall	Length	9,805	10,350	
	Width	2,490	2,490	
	Height	3,325	3,325	
Wheel Tread	Front	2,045	2,045	
	Rear	1,825	1,825	
Overhang (Body)	Front	1,595	1,595	
	Rear	1,290	1,555	
Overhang (Frame)	Front	1,385	1,385	
	Rear	880	900	
Angle	Approach	25.0	25.0	
	Departure	22.9	22.9	
Min. Ground Clearance	260		260	

### Weight (kg)

Chassis Cab Weight		11,300	11,320	
	Front	5,870	6,000	
	Rear	5,430	5,320	
Max. Gross Vehicle Weight *		42,600	42,600	
	Front	15,000	15,000	
	Rear	27,600	27,600	

\* Max. GVW includes the front & rear axle loads based on the permissible tire load. / Max. GVW may vary according to rear axle(Single, Hub) and tire(12.00R20, 315/80R22.5, 295/80R22.5, 12R22.5)

## 2. Performance Specification

### Calculated Performance

Model	D6CL44				D6CK44				D6CM44			
	Medium / Extra Long				Medium / Extra Long				Medium / Extra Long			
Transmission	T230S12				ZF16S2230TO							
Final Reduction Gear	Type	Single Reduction		Hub Reduction		Single Reduction		Hub Reduction				
	G/Ratio	3.667	4.111	4.8	5.27	3.417	3.667	4.36	4.8			
Max. Speed	km/h	120.0	110.5	94.6	86.2	120.0	115.0	96.7	87.9			
Max. Gradeability	@ GVW : (Single) 40200kg (Hub) 42600kg	tan $\alpha$	0.409	0.459	0.506	0.556	0.428	0.459	0.516	0.569		
Min. Turning Radius	m	10.0 / 11.2			10.0 / 11.2			10.0 / 11.2				

※ Min. Turning Radius Calculated Base on Front Wheel Outer Tire Center Line

## 3. Chassis Specification (1/3)

### Engine

Model	D6CL44		D6CK44		D6CM44	
Type	Turbo Charger Intercooler 4 stroke-cycle, water-cooled, direct-injection diesel engine					
Number of Cylinder	6 in-line					
Piston Displacement (cc)	12,742					
Bore x Stroke (mm)	130X160		130X160		130X160	
Compression Ratio	17.2 : 1					
Max. Power *	Euro III	440 / 1800		-		-
	Euro IV	-		440 / 1800		-
	Euro V	-		-		440 / 1800
Max. Torque *	Euro III	214 / 1200		-		-
	Euro IV	-		214 / 1200		-
	Euro V	-		-		214 / 1200
Exhaust Gas After Treatment System	-		EGR + PMC		EGR + PMC	
Cooling System	General	Water cooling type with thermostat, forced circulations by centrifugal pump				
	Cooling fan	Suction Type				
	Radiator	Louver fin and tube type with pressure cap and condenser tank				
Electrical System	Battery	24V-165AH-MF(STD) / 24V-180AH-MF(OPT)				
	Alternator	24V-90A				
	Starter	24V-6.0kw				
Fuel System	Injection pump	Delphi EUI System				
	Governor	included to ECU				
Oil System	Lubrication	Forced lubrication by gear pump				
	Oil grade	API service classification CF-4 above	API service classification CI-4 above		API service classification CI-4 above	
Air cleaner	Dry paper element					
Valve System	Single overhead camshaft, Four valves per cylinder					

### Clutch

Type	Single Dry plate, Diaphragm Pull
Facing Material	SC500 (Non-asbestos)
Facing Size(mm); Outside dia. x Inside dia.	Φ430 X Φ242

\* Max. Power and Torque of engine may vary according to each country.

## 3. Chassis Specification (2/3)

### Transmission

Model		T230S12	ZF16S2230TO
Type		F : 12 Speed / R : 2 Speed	F : 16 Speed / R : 2 Speed
Gear Ratio	1st	12.29 / 9.57	13.80 / 11.54
	2nd	7.49 / 5.83	9.49 / 7.93
	3rd	4.57 / 3.55	6.53 / 5.46
	4th	2.69 / 2.10	4.57 / 3.82
	5th	1.64 / 1.28	3.02 / 2.53
	6th	1.00 / 0.78	2.08 / 1.74
	7th		1.43 / 1.20
	8th		1.00 / 0.84
Reverse		10.86 / 8.46	12.92 / 10.80
Gear Oil		15ℓ	15.5ℓ
T.G.S. (Transmission Gear Shift)		Cable Gear Shift (with P/Shift)	

### Propeller shaft

Model	HZ68
Type	Tubular, Forged steel ends
Size (diameter x Thickness)	Φ140 × 6 t

### Rear Axle

Model	R178HT (Single Reduction) / H120S (Hub Reduction)	
Type	Banjo Type	
Capacity (kg)	R178HT (Single): 13,000 / H120ST (Hub): 16,000	
Final Reduction Gear	Type	Single Reduction, Hypoid Gear / Hub Reduction, Sprial Gear
	G/Ratio	Single Reduction [3.417(ZF16S2230TO), 3.667, 4.111(T230S12) ] / Hub Reduction [ 4.36(ZF16S2230TO), 4.8, 5.27(T230S12)
Gear Oil		GL-5 SAE 80W90

### Front Axle

Type	Reverse Elliot Type "I" Beam
Capacity (kg)	8,000

### Tire & Wheel

Tire	Tube	Front	12.00R20-18PR(Rib)
		Rear	12.00R20-18PR(Lug)
	Tubeless	Front	315/80R22.5-18PR(Rib)
		Rear	315/80R22.5-18PR(Lug)
Wheel *	Front	20-8.50, 22.5x9.00	
	Rear	20-8.50, 22.5x9.00	

\* Steel(Silver) Wheel is available with All types of Tire / Aluminum Wheel is NOT available

## 3. Chassis Specification (3/3)

### Brake

Service Brake	Actuation		Full Air, Dual Circuit
	Drum Brake	Front	DRUM:Φ410X200X20(Drum Inner Diameter X Lining Width X Lining Thickness)
		Rear	DRUM:Φ410X200X20(Drum Inner Diameter X Lining Width X Lining Thickness)
	Air reservoir		145(FRT 55, REAR 70, AUXILIARY 20)
	Total lining area		DRUM : 1,075,692(FRT 1ST : 268,923 FRT 2ND : 268,923 REAR 1ST : 268,923 REAR 2ND : 268,923)
Adjuster		Auto Slack adjuster	
Parking Brake	Actuation		FULL AIR BRAKE
	Size (mm)	DRUM : Drum Inner Diameter X Lining Width X Lining Thickness	
		DRUM BRAKE : FRT 2ND Φ410X200X20, REAR 1ST Φ410X200X20	
Total lining area		DRUM : 537,846(FRT:268,923 REAR 1ST : 268,923)	

\* Brake Size : Drum (Inner Diameter x Lining Width x Lining Thickness) / Disc (Rotor Effective Diameter x Pad Width x Pad Thickness)

### Suspension

Type	Front	Rigid Type (Multi Leaf)	
	Rear	Rigid Type (Multi Leaf)	
Spring Size *	Multi Leaf	Front	1,800 X 90 X 16- 1,15-11
		Rear	1,350 X 90 X 25 -12
Stabilizer bar	Front	Φ45	
	Rear	Φ55	
Shock absorber		Oil charged type on the front & rear	

\* Spring Size : Length x Width x Thickness- Number of leaves

**Steering**

Type	4-Spoke, Ball-Nut Type,Tilt & Telescopic, Steering Column	
Steering Wheel Diameter (mm)	Power	450
Tilting Angle	40°	
Telescopic Stroke (mm)	65mm	
Overall Steering Gear Ratio	Power	22.2~26.2
Turning Angle	Inner	50
	Outer	36

**Air intake system**

General	Snorkel type at the rear of Cab	
Air cleaner type	Dry paper element	
Air cleaner position	Bottom of Passenger Seat	

**Fuel tank**

Capacity	400L	
Material	Steel	

**Cooling system**

Radiator	Corrugated fin type & condense tank	
	Rows of tubes	4
	Core size (mm)	858.3 X 800 X 40 (WIDTH X HEIGHT X DEPTH)
Cooling Fan	ELECTRONIC-COOL'G FAN	

**Exhaust system**

General	Conventional (horizontal) type muffler	
Tail pipe	Droptail type, blowing to chassis rearward	

**Urea tank**

Capacity	N/A	
Material	N/A	

**Frame**

Type	H type frame with channel sectional side rail & cross members,side rail is reinforced with inner stiffeners	
Main section side rail dimension (mm)	Depth x Flange x Thickness : 300 x 90 x 8 t	
Inner Stiffener (mm)	Depth x Flange x Thickness : 280 x 80 x 5 t	

**Electrical Equipments**

Head lamps	MFR Type	
Front combination lamps	Turn signal / Hazard-Amber , Position - White	
Fog lamps	White	
Rear combination lamps	Turn signal / Hazard-Amber , Tail / Stop - Red , RR FOG - Red , RR EOML - Red , RR Side marker - Amber	
License plate lamp	White	
Back-up lamp	White	

**Instruments**

Meter Cluster	Fixed Type	
Meter	Speedometer / Tachometer / Fuel & Water temperature gauge / Urea & engine oil pressure gauge / Air pressure gauge / LCD with odometer	
Warning lamps & indicators	Turn signals & Hazard / Parking brake / Oil pressure with buzzer / Door open / Charging / Main beam / Cab tilt lock with buzzer / Exhaust Brake / Preheating / Seat belt / Overheat & coolant level with buzzer / Brake air with buzzer / Low fuel	
Horn	Single, Electric Horn / Single, Roof Air Horn	