A SERIES IC FORKLIFT TRUCK

FDT80/FDT100

Load capacity: 8,000KG/10,000KG

maximal

Overview

The A Series 8–10 ton internal combustion counterbalance forklift is newly developed with a Stage V engine, meeting higher emission standards while still delivering high power output.

Designed for harsh and demanding environments, it's ideal for long shifts in warehouses, logistics centers, airports, ports, and docks.

The A Series is built to deliver greater efficiency and enhanced operator comfort—perfect for the most challenging job sites.

Engineered for High Efficiency

Engine

- Upgraded **Stage V Cummins 3.8L engine diesel** engine with stronger power output
- **Adaptive dynamic power system:**
  - Adjusts RPM based on load and accelerator input
  - Improves performance and fuel efficiency under various conditions
- Lower fuel consumption with higher environmental standards (Stage V/T4/Korea 5)

Transmission & Braking System

- **Electronic ZF transmission:**
  - 3-speed forward / 3-speed reverse
  - Powershift configuration
- **Multiple oil wet brake** available to suit different applications
- **Torque converter with hydraulic automatic shifting:**
  - Ensures smooth and seamless gear transitions
  - Provides responsive speed control

Performance & Efficiency

- **Fast mast lifting speeds** to Increases overall work efficiency
- Enhances truck performance **in various mission profiles**
- **Ideal for demanding applications** where speed and fuel savings matter

Safety & Ergonomics

Confidence in Every Operation.
Comfort in Every Move.

Safety First

- **Wide-View Mast**
  - Expansive forward visibility improves operator awareness and precision
  - Enhances both comfort and productivity during load handling
- **Low Center of Gravity**
  - Improves truck stability and load-handling capacity
  - Increases overall safety during transport and lifting
- **High-Strength Overhead Guard**
  - Constructed with profiled steel for maximum operator protection
  - Durable and impact-resistant for demanding environments
- **Operator Presence System**
  - Standard seat switch detects operator presence
  - Enhances operational safety by preventing unintended movement

Designed for Operator Comfort

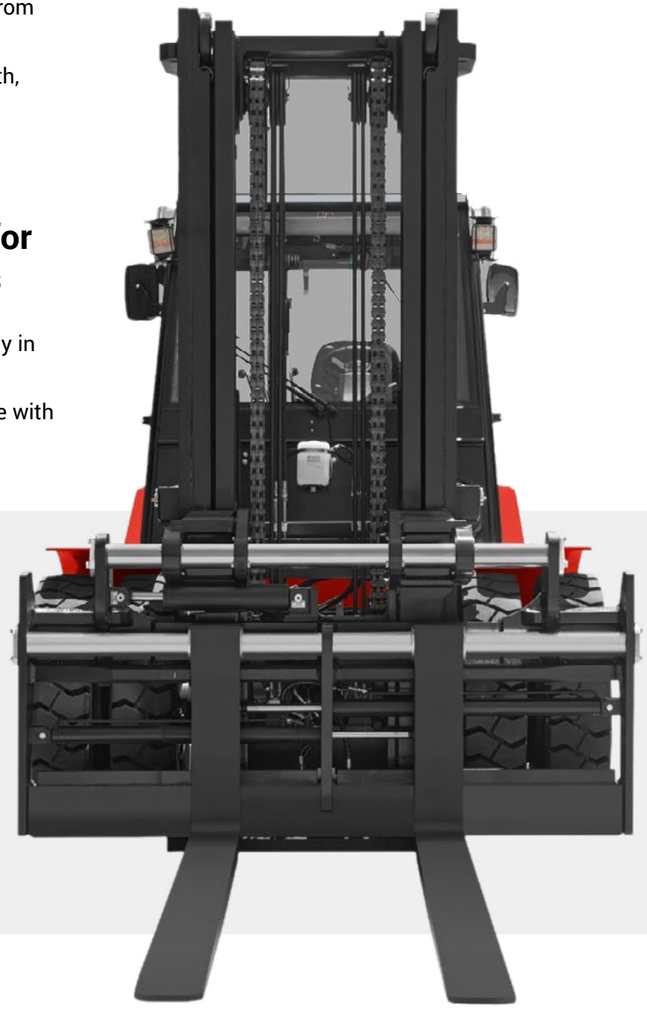
- **Easy 3-Point Access**
  - Wide steps and low intermediate step allow smooth, safe entry and exit
- **Adjustable Steering Column**
  - Customizable tilt angle ensures a comfortable driving posture
- **Familiar 3-Pedal Layout**
  - Inching pedal, brake, and accelerator arranged for intuitive control
  - Improves load handling precision and ramp control
- **Ergonomic Control Layout**
  - All essential controls positioned within easy reach
  - Supports natural operation and reduces fatigue
- **Clear, Informative Display**
  - Easy-to-read 3.5" color LCD screen shows real-time truck data
- **Comfortable, Adjustable Seat**
  - Reduces physical strain during long shifts
  - Equipped with an operator seat **switch for added safety**

Stability and durability

Built to Last. Trusted to Perform

Durable Driving & Steering Axles

- Heavy-duty **cast iron drive axle housing** ensures long-lasting durability and load-bearing strength.
- **Welded steering axle** with a sandwich structure protects steering cylinders from impact and wear.
- **Hydraulic power steering** offers smooth, reliable control for a better driving experience—even under pressure.



Cooling System -Built for high-heat environments

- The cooling system operates efficiently in temperatures up to **40°C (104°F)**.
- Maintains optimal engine performance with consistent, high-capacity cooling.

Precision Powertrain Integration

- **Engine and transmission** are perfectly matched for seamless power delivery and reduced fuel consumption.
- High-performance parts from **trusted international suppliers** ensure top-tier quality and long-term dependability.

Built Tough from the Inside Out

- **High-quality welding** enhances structural integrity.
- **Reliable pipeline layout** supports long-term system performance.
- **High-temp resistant oil pipes** and **waterproof**, **shock-resistant electrical connectors** keep critical systems running under stress.

Engineered for Confidence

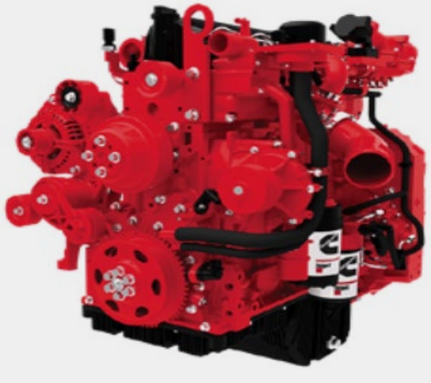
- Proven by **FEA and DFMEA simulation methods**, our design is tested for endurance and performance.
- Built to withstand demanding conditions while reducing maintenance needs—keeping your operations efficient and dependable.

ENGINE SPECIFICATIONS QSF 3.8

- Electronic High Pressure Common Rail (HPCR) fuel system
- Wastegated turbocharger with CAC
- Remote Electronic Control Module (ECM)
- Globally serviceable and after-market support

QSF 3.8 C121 (Stage V / T4 / Korea 5) engine

- 121 hp (90 kW) @ 2200 rpm
- Peak Torque is 500 Nm @ 1500 rpm



Easy Service. Smarter Maintenance.

Keep your operations running smoothly with a truck designed for maximum uptime and minimal hassle.

Effortless Maintenance Access

- **Wide-angle engine cover** design allows quick, easy access to all major components
- **Simplified filter replacement** speeds up routine service tasks

Smart Diagnostic System

- Real-time **monitoring system** continuously tracks vehicle performance
- Immediate **error code display** helps operators identify issues and take prompt action
- Minimizes downtime through early detection and quick troubleshooting

Reliable Electrical System

- **24V electrical system** offers proven stability and durability
- **CAN-bus architecture** ensures:
  - Simplified wiring and component layout
  - Efficient communication between systems
  - Easy maintenance and streamlined fault diagnosis

Durable Braking & Hydraulic Protection

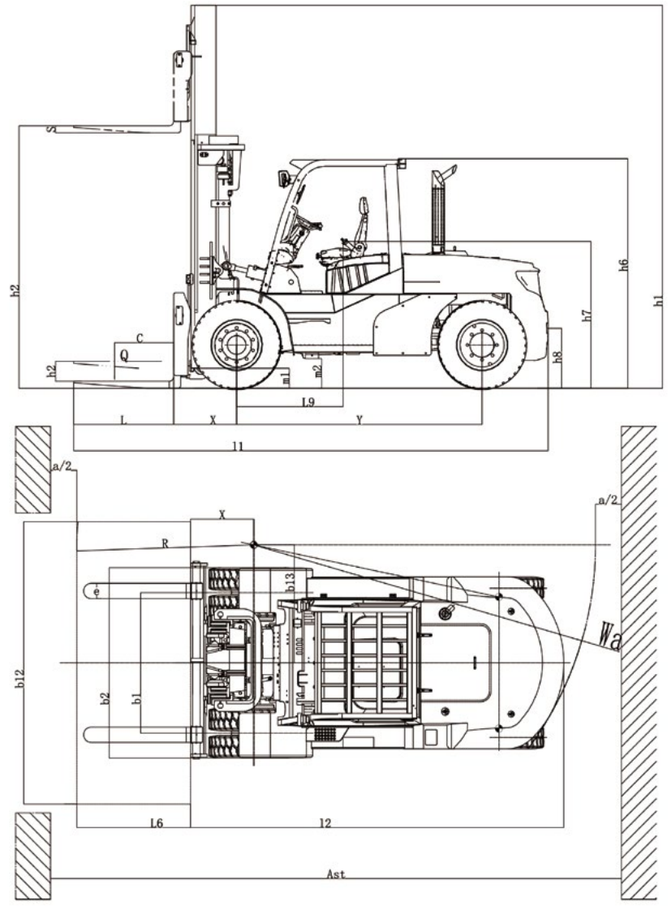
- **Wet brake system** on the standard drive axle:
  - Reduces heat buildup
  - Minimizes wear and maintenance with cost of ownership
- **Tilt cylinders with protective sleeves** offer superior rod protection, improving component life

VDI 2198 - 2019

Distinguishing mark	1.1	Manufacturer		HYM	HYM
	1.2	Manufacturer's type designation		FDT80	FDT100
	1.3	Drive: electric(battery or mains, ...), diesel, petrol, fuel gas		Diesel	Diesel
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Seated	Seated
	1.5	Rated capacity / rated load	Q (kg)	8000	10000
	1.6	Load centre distance	c (mm)	600	600
	1.8	Load distance, centre of drive axle to fork	x (mm)	720	720
	1.9	Wheelbase	y (mm)	2800	2800
	1.10	Stacking height (number × container height, in feet)	h23	3000	3000
Weight	2.1	Service weight	kg	12720	13770
	2.2	Axle loading, laden front / rear	kg	19460/1260	21670/2100
	2.3	Axle loading, unladen front / rear	kg	6790/5930	6860/6910
Tyres / chassis	3.1	Tyres: Solid rubber, superelastic, pneumatic, polyurethane		Pneumatic	Pneumatic
	3.2	Tyre size, front		9.00-20 14PR	9.00-20 14PR
	3.3	Tyre size, rear		9.00-20 14PR	9.00-20 14PR
	3.5	wheels, number front / rear (× = driven wheels)		4/2	4/2
	3.6	Tread, front	b10 (mm)	1912	1912
	3.7	Tread, rear	b11 (mm)	1723	1723
Dimensions	4.1	Tilt of mast / fork carriage, forward / backward	α / β (°)	6/12	6/12
	4.2	Height, mast lowered	h1 (mm)	2850	2850
	4.3	Free lift	h2 (mm)	170	170
	4.4	Lift	h3 (mm)	3000	3000
	4.5	Height, mast extended	h4 (mm)	4250	4250
	4.7	Height of overhead guard(cabin)	h6 (mm)	2580	2580
	4.8	Seat height relating to SIP / stand height	h7 (mm)	1465	1465
	4.12	Coupling height	h10 (mm)	485	485
	4.19	Overall length	l1 (mm)	5500	5500
	4.20	Length to face of forks	l2 (mm)	4280	4280
	4.21	Overall width	b1 / b2 (mm)	2165	2165
	4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)	80/175/1220	80/175/1220
	4.23	Fork carriage ISO 2328. Class/type, A, B		Pin type	Pin type
	4.24	Fork-carriage width	b3 (mm)	2250	2250
	4.31	Ground clearance, laden, below mast	m1 (mm)	225	225
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	300	300
	4.33	Load dimension b 12×/6	b12×l6 (mm)	1200X1200	1200X1200
	4.34	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	6020	6020
	4.34.1	Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	6020	6020
	4.35	Turning radius	Wa (mm)	4080	4080
	4.36	Internal turning radius	b13 (mm)	1580	1580
Performance data	5.1	Travel speed, laden / unladen	km/h	26/28	26/28
	5.2	Lift speed, laden / unladen	mm/s	321/365	321/365
	5.3	Lowering speed , laden/unladen	mm/s	459/376	459/376
	5.5	Drawbar pull laden/unladen	KN	69/65	69/65
	5.7	Gradeability, laden/unladen	%	20/20	20/20
Combustion-engine	7.1	Engine manufacturer/type		Cummins QSF3.8	Cummins QSF3.8
	7.2	Engine power according to ISO 1585	KW	90	90
	7.3	Rated speed	min-1	2200	2200
	7.4	Number of cylinders/displacement	(-)/(cm3)	4/3800	4/3800
	7.6	Turnover output according to VDI 2198	t/h	630t/h	630t/h
	7.7	Turnover efficiency according to VDI 2198	t/kg	48.8t/kg	48.8t/kg
	7.9	Vehicle electrical system voltage	V	24	24
	7.10	Battery voltage/nominal capacity	(V)/(Ah)	24/90	24/90
	8.1	Type of drive unit		Hydrodynamic Transmission	Hydrodynamic Transmission
Additional data	10.1	Operating pressure for attachments	bar	140	140
	10.4	Fuel tank,capacity	l	185	185
	10.7	Sound pressure level at the driver's seat	dB (A)	87.3/87.5	87.3/87.5
	10.7.1	Sound power level during the workcycle	dB (A)	108.6	108.6

DIMENSION DIAGRAM - FDT80/FDT100

TRUCK DIMENSION DIAGRAM



MAST DATA SHEET

Mast Type	Lift Height (h3)	Height, mast lowered (h1)	Free lift Without LBR (h2)	Load Distance (x)	Mast Tilt		Capacity 600mm load centre Dual front tyre		Mast weight	
		8.0T-10.0T	8.0T-10.0T	8.0T-10.0T	Forward	Back	8.0T	10.0T	8.0T	10.0T
	mm	mm	mm	mm	Deg	Deg	kg	kg	kg	kg
2-Stage LFL	3000	2850	210	720	6	12	8000	10000	3128	3128
	3300	3000	210	720	6	12	8000	10000	3212	3212
	3500	3100	210	720	6	12	8000	10000	3257	3257
	3750	3225	210	720	6	12	8000	10000	3307	3307
	4000	3400	210	720	6	12	8000	10000	3447	3447
	4500	3650	210	720	6	12	8000	10000	3552	3552
	5000	3900	210	720	6	6	7800	10000	3664	3664
	5500	4200	210	720	3	6	7400	9000	3905	3905
	6000	4450	210	720	3	6	7000	8000	4015	4015

Maximal FDT80/100 CONFIGURATION

PERFORMANCE	STD	OPT
Cummins F3.8 C121 (Stage V/T4/Korea 5)	●	
Cummins QSF3.8 C115 (T3 R96)		●
Wastegate turbocharger, water cooled	●	
Hibernate Idle	●	
Powertrain protection system	●	
Heavy duty air intake	●	
Heavy duty air intake with pre cleaner		●
2F/2R Electronic control transmission		●
ZF 3F/3R Electronic control transmission	●	
Drive axle with drum brakes		●
Drive axle with wet brakes	●	
DRIVE	**STD**	**OPT**
09.00-20-14PR pneumatic tires	●	
09.00-20 Solid (PPS)		●
Speed limiter		●
LIFT	**STD**	**OPT**
2 stage limited freelift mast	●	
6° forward /12° back tilt	●	
6° forward /6° back tilt		●
3° forward /6° back tilt		●
HANDLING	**STD**	**OPT**
2250mm (89") wide individual fork positioner	●	
2250mm (88") wide sideshift, simultaneous fork positioner		●
2450mm (96") wide sideshift, simultaneous fork positioner		●
2650mm (104") wide sideshift, simultaneous fork positioner		●
1220 x 175 x 80mm PIN type standard tapered fork	●	
Selection of alternative fork lengths		●
ERGONOMICS	**STD**	**OPT**
Overhead guard	●	
Top screen		●
Front screen with wiper		●
Full steel cabin operator compartment with front, rear wipers		●
Heavy duty air conditioning		●

ERGONOMICS	STD	OPT
Heater		●
Operator fan		●
Operator presence system	●	
Comfortable seat	●	
Full-suspension seat (vinyl)		●
Multifunction display panel	●	
Steering wheel with spinner knob	●	
Directional control lever on steering column	●	
Manual park brake	●	
Tilting steering column	●	
VISIBILITY	**STD**	**OPT**
Rear view mirrors	●	
LED work lights	●	
Turn signals & marker lights (LED)	●	
Rear view camera system		●
Mast camera with display screen		●
Radar object detection system		●
OPERATION	**STD**	**OPT**
24 volt electrical system	●	
Horn	●	
Visible alarm – amber strobe light, keyswitch activated	●	
Audible alarm – reverse direction activated 82–102 dB(A)	●	
Seatbelt interlock for engine start and truck operation		●
APPEARANCE	**STD**	**OPT**
Maximal red paint base truck	●	
SUPPLEMENTAL	**STD**	**OPT**
Literature package	●	
Operator's manual	●	
Warranty: 14 Months / 2,000 hours parts manufacturer's warranty	●	

maximal

CE ISO 14001 ISO 9001

Контакты продавца
kupit-shtabeler.ru
zakaz@kupit-shtabeler.ru
+7 495 159-44-32

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