



CENTRALIZED MAINTENANCE POINTS FOR EASY INSPECTION AND MAINTENANCE

Inspection and maintenance is made easy thanks to a fully extendable engine hood, removable side covers and centralized maintenance points. In addition, the time intervals between oil changes and lubrication requirements have been increased, resulting in lower maintenance costs.



GRENDIA

*Ready to Perform
To Your Applications*



www.mitforklift.com.sg

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PRESENTED BY :

Note: Performance specifications may vary depending on standard manufacturing tolerances, vehicle condition, types of tyres, floor or surface conditions, applications or operating environment. Trucks may be shown with non-standard options. Specific performance requirements and locally available configurations should be discussed with your Mitsubishi forklift truck dealers. Mitsubishi Forklift Trucks follows a policy of continual product improvement. For this reason, some materials, options and specifications could change without notice.

Internal Combustion Pneumatic Tyre 1.5-3.5 ton

Mitsubishi

GRENDIA

Series Forklift Trucks

SETTING NEW STANDARDS



FGE15N

Electronically controlled gasoline engine
Capacity rating 1500kg @ 500mm load center

A next generation, higher performance machine

Thanks to the application of new technologies the Mitsubishi Grendia is not only easier to operate but friendly to the environment as well.

The new Mitsubishi Grendia's engine is very fuel-efficient and has ultra low emissions, which either complies with or exceeds the latest international environmental standards. In addition to safety. For instance, all Grendia forklift trucks has increased rider comfort and enhanced which enhances safety and helps reduce accidents. LCD graphic displays and digital monitoring systems also make the Grendia safer more efficient.

It's the forklift of tomorrow that's available today.



FD25N

Diesel engine
Capacity rating 2500kg @ 500mm load center

MEETS THE ENVIRONMENTAL REQUIREMENTS OF TODAY AND TOMORROW

GRENDIA'S ECO-POWER



Electronically controlled gasoline engine K25E



Three-way catalytic muffler

**NEW 2007 EMISSION STANDARDS COMPLIANT*:
NEW ELECTRONICALLY CONTROLLED GASOLINE ENGINE**

Mitsubishi Grendia's advanced gasoline engine, which helped pioneer the standard use of electronically controlled fuel injection and three-way catalytic converters in forklift trucks, has evolved even further. The new Grendia has achieved remarkable environmental controls and complies with all 2007 Emission Standards while still maintaining high performance and reliability levels.

* 2007 Emissions Standard for Specific Special Vehicles (including off-road vehicles)
Compliant with Emissions Standard for Specific Special Vehicles
Ministry of the Environment
Ministry of Economy, Trade and Industry
Ministry of Land, Infrastructure and Transport



TWO-LEVEL HIGH/LOW SPEED LIMITER

The Grendia's automatic speed limiter can be set to two levels – outdoors (HIGH) and indoors (LOW). Drivers can alternate between the two speed limits at the flick of a switch, helping them to choose the most appropriate fuel efficiency for the location.

* Standard for Electronically Controlled Gasoline Engine Trucks



POWER/SOFT MODE SWITCH

Depending on the task, two power levels can be selected: POWER mode, which maximizes power output and SOFT mode for fuel efficiency and low noise levels. Selecting SOFT mode cuts CO₂ emissions by approximately 13% compared to the POWER mode.

* Standard for Electronically Controlled Gasoline Engine Trucks

2007 EMISSION STANDARDS COMPLIANT*: HIGH RELIABILITY DIESEL ENGINE

The well-known performance levels of the highly acclaimed Mitsubishi Diesel Engine have been maintained but now come with eco-friendly refinements. The upgraded engines have now achieved low emission levels in compliance with the 2007 Emission Standards without compromising horsepower or reliability.

* 2007 Emissions Standard for Specific Special Vehicles (including off-road vehicles)
Compliant with Emissions Standard for Specific Special Vehicles
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Swirl-chamber diesel engine S4S



LOW-NOISE DESIGN FOR MAXIMUM COMFORT WITH MINIMAL OPERATOR FATIGUE

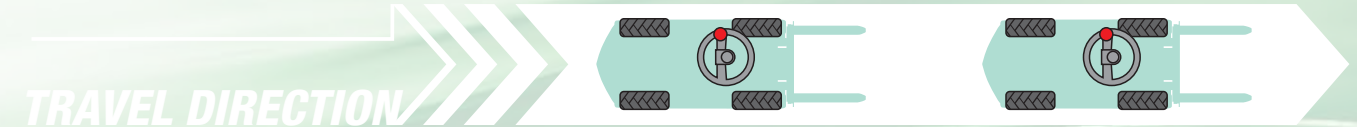
With features such as low-noise engine, enhanced soundproofing of the engine compartment and floor level noise dampening, Mitsubishi Forklift Trucks has achieved a quiet working environment both for the operator and the surrounding working environment.

* ISO-equivalent noise level (When diesel engine is in SOFT mode at high idle speed)

STEERING SYNCHRONIZER

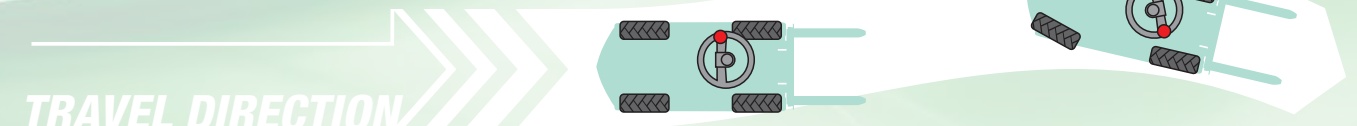
With full hydrostatic steering, steering is easy but hard to keep the truck straight without continuously adjusting the steering wheel. Such operation is difficult when truck has to work in confined space like containers. With steering synchronizer, the system actively checks and eliminates the misalignments to keep the truck straight without constantly adjusting the steering wheel.

With Steering Synchroniser



Without Steering Synchroniser

* Difficulty in maintaining a straight line while driving



"SAFETY FIRST"

INTEGRATED PRESENCE SYSTEM – "IPS"

Grendia is fitted with Mitsubishi's IPS, an integrated active safety system designed to improve vehicle safety by actively detecting problems before they become accidents. It not only ensures safety during vehicle operation but also prevents errors when the operator is not seated, protecting both the operator and the workplace from potential accidents.



NEW INTEGRATED DIGITAL MONITORS

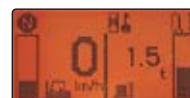
In the cab, digital displays are used to provide easier monitoring of systems and controls. The digital panel illuminates when the ignition is switched on allowing speed, load weight and system monitors to be checked at a glance.



VEHICLE SPEED DISPLAY



LOAD WEIGHT DISPLAY



optional

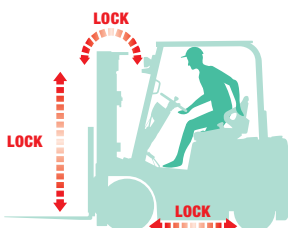
MAST AND TRAVEL INTERLOCK

Mitsubishi Grendia forklift trucks are equipped with mast and travel interlock protection device that is linked to the operator's seat. If the operator is not seated, the mast and (for torque-converter models) the movement of the vehicle itself, is automatically locked in order to prevent injury or damage to property.

* Note that brakes are not applied in travel interlocking, so trucks can still move on slopes due to gravity.

LIFT LOCK

The fork on the Mitsubishi Grendia is automatically locked when the ignition is switched off, so it remains in position even if the lift lever is accidentally bumped or moved.



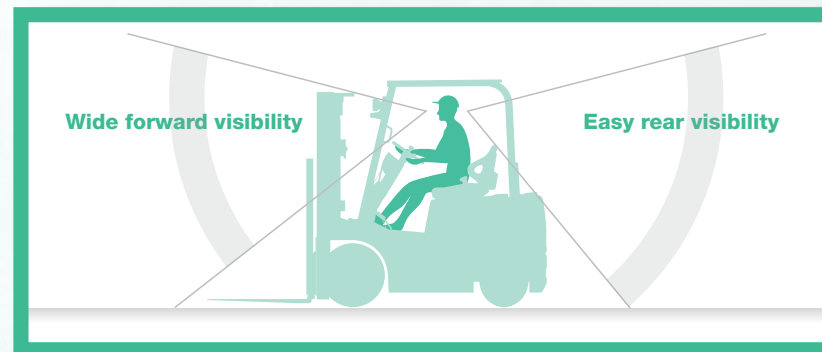
"SAFETY FIRST"

– YET ANOTHER GRENDIA HALLMARK

INNOVATIVE AND RELIABLE SAFETY FEATURES HELP PROTECT OPERATORS AND WORKPLACE

NEUTRAL SAFETY

A Neutral Safety device, which prevents the engine from starting unless the forward/backward lever is positioned at neutral, is now built in on all vehicles, including all torque-converter-fitted vehicles and all direct drive vehicles.



WIDE FORWARD VISIBILITY CLEAR REAR VISIBILITY

Unlike some forklift trucks, Mitsubishi Grendias have wide unobstructed visibility that extends from the tip of the fork to the top of the mast. Greater rear visibility is made possible by the Grendia's compact tail design.

HIGH-MOUNTED REAR COMBINATION LAMP

All Mitsubishi Grendias are installed with rear combination lamps above the head guard that clearly signals braking or stopping to vehicles or persons behind the forklift truck.

* Positions will differ for forklifts requiring vehicle inspection in Japan.



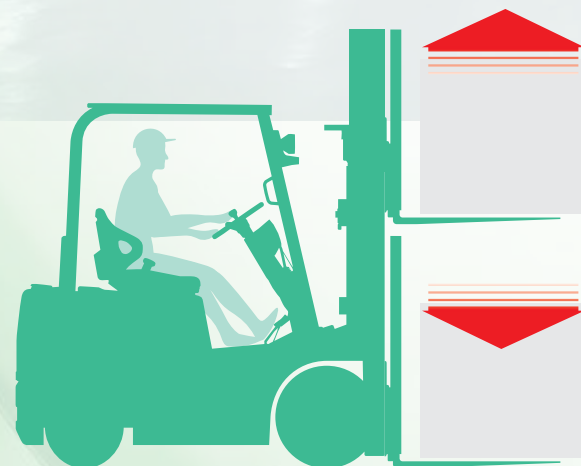
COMPACT TURNING

Tight turns are easy with the Grendia thanks to a fully hydraulic power steering fitted with steering synchronizer/mechanism for 100% stationary steering. Its manoeuvrability allows for easy U-turns and navigation in small workspaces.

EXCELLENT PERFORMANCE

POWERFUL LIFTING CAPACITY

Mitsubishi Grendias are constructed with a low center of gravity frame that optimised vehicle balance and stability during lifting. That means a greater load capacity with much greater stability. The high-torque, high-power engine maintains a stable lift speed regardless of the load, helping operators to increase productivity.



EXCELLENT LIFTING ABILITY

Lift speed: **640mm/s** (when loaded)
660mm/s (when not loaded) • FGE25ZN

No capacity deration up to a height of 4 meters (2-stage mast)

SOFT LANDINGS

Another exclusive feature found on the Mitsubishi Grendias is soft landing system that activates when the fork nears the ground, automatically protecting loads from hard drops or shocks.

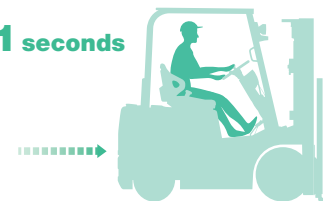
* only for two-stage masts

SMOOTH RUNNING

The high power engine and the high performance transmission are perfectly matched to produce an extremely smooth start/acceleration as well as excellent traction even on uphill slopes. Excellent braking and stopping control is provided by a robust and reliable due-servo system.

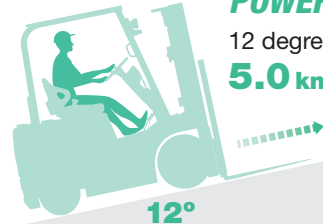
SMOOTH ACCELERATION

10m acceleration **3.1 seconds**
(unloaded) • FD25N



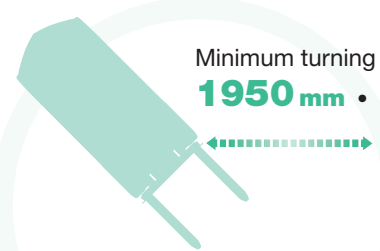
POWERFUL UPHILL ABILITY

12 degree uphill velocity
5.0 km/h (unloaded) • FD25N



EXCELLENT STEERING ABILITY

Minimum turning radius
1950 mm • FD15N



GRENDIAS ARE EASY TO MANEUVER EVEN IN CRAMPED WAREHOUSES AND DELIVERY BAYS

Right angle stacking aisle width
3650 mm • FD15N



EASY OPERATION. DRIVER COMFORT.



Suspension seat with hip support mechanism. Ability to adjust position and extent of reclining according to body shape for maximum comfort. Seat belt fitted with warning light. Soft-grip handle makes getting in and out easier.



Inching pedal allows delicate movements.



Electric shift lever can be moved back and forth at the touch of a finger. (for torque-converter models only).



Switches for optional functions positioned on the right side of the dashboard.



Acrylic roof for comfortable operation in outdoor conditions. Easily installed and uninstalled.



Combination switch integrating indicators and headlight switches.



Tiltable steering column

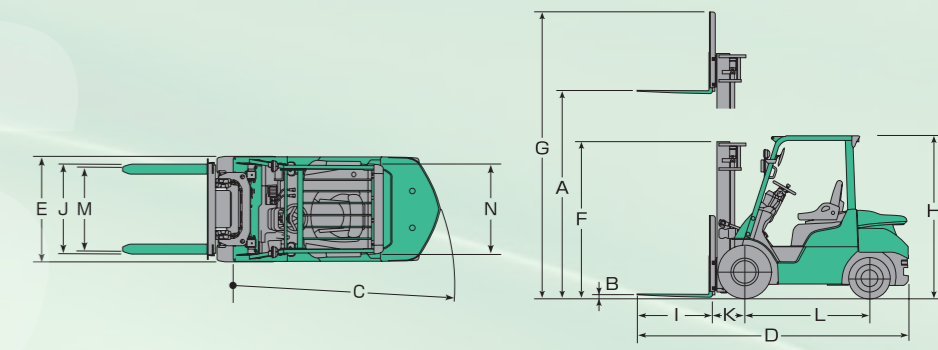


Power-train full floating structure for excellent vibration reduction. The entire power-train is supported by vibration absorbent rubber mounts.



Fully hydraulic power steering
The full hydraulic steering allows for effortless steering even if truck is in a stationary position.

SPECIFICATIONS



CHARACTERISTICS																																	
Type of Truck			DIESEL ENGINE TRUCK										GASOLINE ENGINE TRUCK								ELECTRONICALLY CONTROLLED GASOLINE ENGINE TRUCK												
Model			FD15N	FD18N	FD20CN	FD20N	FD25N	FD30N	FD35N	FG15N	FG15ZN	FG18N	FG18ZN	FG20CN	FG20N	FG20ZN	FG25N	FG25ZN	FG30N	FG35N	FGE15N	FGE18N	FGE20CN	FGE20N	FGE20ZN	FGE25N	FGE25ZN	FGE30N	FGE35N				
Loading Capacity			1500	1750	2000	2500	3000	3500						2000	2000	2500	3000	3500	1500	1750			2000	2000	2500	3000	3500						
Load Center			500		500			500					1750		500		2500		3000	3500	500		500		500		500		3000	3500			
PERFORMANCE																																	
Maximum Fork Height			3000	3000						3000						3000						3000						3000					
Free Fork Height			115	120		140		145		115		120		140		145		145		115		120		140		145		145					
Speeds	Lifting	Loaded	630	630		500		420		490		570		490		570		570		390		630		580		640		510		430			
		Unloaded	690	650		660		530		450		560		650		560		650		600		650		650		590		530		440			
Speeds	Lowering	Loaded	520	520		500		530		420		520		520		500		530		420		520		520		500		530		420			
		Unloaded	500	500		500		400		500		500		500		500		500		400		500		500		500		500		400			
Tilt	Mast	Forward	6	6		6		6		6		6		6		6		6		6		6		6		6		6		6			
		Backward	12	12		12		12		12		12		12		12		12		12		12		12		12		12		12			
Speeds	Traveling (Powershift)	Loaded	19	19		19		19		19		19		19		19		19		19		19		19		19		19		19			
		Unloaded	19.5	19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5			
Maximum Drawbar Pull	Manual	Loaded	1260	1250	1210	1830	1810	1770	1680	1110	1530	1090	1520	1480	1520	1750	1500	1730	1710	1630	1710	1670	1690	1860	1690	1870	1860	1750					
		Unloaded	1180	1160	1130	1500	1480	1460	1380	960	1280	950	1270	1230	1280	1620	1250	1590	1500	1390	1380	1360	1390	1630	1380	1620	1660	1560					
Maximum Gradeability	Manual	Loaded	33	29	25	36	31	25	21	29	25	36	31	31	30	35	25	30	24	20	48	42	36	34	38	29	33	27	22				
		Unloaded	30	27	23	29	24	20	17	24	22	33	29	25	25	32	21	27	22	19	38	34	29	28	33	24	28	24	20				
Turning Radius			1950	1980	2020	2200	2230	2380	2440	1950		1980		2020	2200	2230	2380	2440	1950	1980	2020	2200	2230	2380	2440	1950	1980	2020	2200	2230	2380	2440	
Practical Intersecting Aisle Width			2065	2080	2105	2195	2215	2325	2365	2065		2080		2105	2195		2215		2325	2365	2065	2080	2105		2195	2065	2080	2105	2195	2215	2325	2365	
Practical Aisle for Right Angle Stacking			3650	3680	3735	3955	3985	4170	4230	3650		3680		3735	3955		3985		4170	4230	3650	3680	3735		3955	3650	3680	3735	3955	3985	4170	4230	
DIMENSIONS																																	
Overall Length			3180	3220	3275	3405	3480	3805	3865	3180		3220		3275	3405	3480	3805	3865	3180	3220	3275		3405	3480	3805	3865	3180	3220	3275	3405	3480	3805	3865
Width	with Standard Tires	mm	1065	1150		1275		1290		1065		1150		1275		1290		1065		1150		1065		1150		1275		1290					
	with Optional Duals	mm	1330	1480		1490		1330		1480		1490		1330		1480		1490		1330		1480		1490		1330		1480		1490			
Height	with Lowered Mast	mm	1990	1990		2015		2130		1990		1990		2015		2130		1990		1990		1990		1990		2015		2130					
	with Extended Mast (with Backrest)	mm	4055	4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055			
	to Top of Overhead Guard	mm	2065	2065	2074	2093	2103	2065	2074	2093	2103	2065	2074	2093	2103	2065	2074	2093	2103	2065	2074	2093	2103	2065	2074	2093	2103	2065	2074	2093	2103		
Forks (Thickness x Width x Length)			35x100x920			45x100x920			45x122x1070			35x100x920			45x100x920			50x125x1070			35x100x920			45x100x920			45x122x1070						
Fork Spread (Out-to-Out Minimum / Maximum)			200-920		244-920		244-1000		244-1000		200-920		220-920		220-1000		250-1000		200-920		244-920		244-1000		244-1000		244-1000						
Front Overhang (Center of Front Axle to Fork Face)			400	415	400	455	400	490	400	415	495	455	460	415	495	460	415	495	415	495	415	495	415	495	415	495	415	495	415	495	415	495	
Wheelbase			1400	1400	1600	1700	1400	1400	1400	1400	1600	1700	1400	1400	1600	1700	1400	1400	1400	1400	1400	1400	1600	1700	1400	1400	1600	1700	1400	1400	1600	1700	
Tread Width	Front, standard tires	mm	890	890	960	1060	890	890	890	890	960	1060	890	890	960	1060	890	890	890	890	890	960	1060	890	890	960	1060	890	890	960	1060	890	890
	Front, optional duals	mm	1025	1140		1140		1025		1140		1140		1025		1140		1025		1140		1140		1025		1140		1140					
Ground Clearance	Rear tyres	mm	900	900	980	980	900	900	900	900	980	900	900	900	980	900	900	900	900	900	900	900	980	900	900	900	980	900	900	980	900	900	
	at Lowest point outer mast	mm	110	110	115	135	150	110	110	115	135	150	110	110	115	135	150	110	110	115	135	150	110	110	115	135	150	110	110	115	135	150	
Tyre Size	at Center of Wheelbase	mm	150	150	160	190	200	150	150	160	190	200	150	150	160	190	200	150	150	160	190	200	150	150	160	190	200	150	150	160	190	200	
	Size Front, standard		6.50-10-10-PR		6.50-10/5.00		7.00-12-12PR		28x9-15-12PR		250-15-16PR		6.50-10-10-PR		7.00-12-12PR		28x9-15-12PR		250-15-16PR		6.50-10-10-PR		6.50-10 / 5.00		7.00-12-12PR		28x9-15-12PR		250-15-16PR				
	Size Front, optional dual		4.50-12-8-PR		5.50-15-8PR		6.00-15-10PR		4.50-12-8-PR		6.00-15-10PR		4.50-12-8-PR		5.50-15-8PR		6.00-15-10PR		4.50-12-8-PR		5.50-15-8PR		6.00-15-10PR		5.50-15-8PR		6.00-15-10PR		6.00-15-10PR				
Size Rear			5.00-8-8-PR		5.00-8/3.00		6.00-9-10PR		6.50-10-10PR		6.50-10-12PR		5.00-8/3.00		6.00-9-10PR		6.50-10-10PR		6.50-10-12PR		5.00-8-8-PR		5.00-8 / 3.00		6.00-9-10PR		6.50-10-10PR		6.50-10-12PR				
WEIGHT																																	
Empty	Powershift (standard)	kg	2550	2740	3060	3410	3710	4350	4740	2490	2690	3010	3300	3600	4240	4630	2490	2690	3010	3300	3600	4240	4630	3010	3300	3600	4240	4630					
	Manual (standard)	kg	2590	2780	3100	3450	3750	4390	4780	2530	2730	3050	3340	3640	4280	4670	2530	2730	3050	3340	3640	4280	4670	3050	3340	3640	4280	4670					
	Powershift (optional dual)	kg	2780	2780	3500	3800	4390	4770	2530	3800	4770	2730	3390	3690	4280	4660	2530	3390	3690	4280	4660	2730	3390	3690	4280	4660	2730	3390	3690				
	Manual (optional dual)	kg	2630	2820	3540	3840	4430	4810	2570	4810	4770	2770	3430	3730	4320	4700	2570	2770	3430	3730	4320	4700	2570	2770	3430	3730	4320	4700					
BRAKE																																	
Service Brake			Hyd.																								Hyd.						
Parking Brake			Hand																								Hand						
POWERTRAIN																																	
Engine	Model		S4Q2	S4Q2	S4S	S4S	GK15	GK21	GK15	GK21	GK21	GK25	GK21	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25	GK25			
		Kw/rpm	30 / 2500	30 / 2500	38,1 / 2250	38,1 / 2250	26 / 2450	34 / 2200	26 / 2450	34 / 2200	26 / 2450	34 / 2200	40 / 2200	34 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200	40 / 2200			
	Max. Rated Power / rpm to DIN 70020	ps/rpm	40.8 / 2500	40.8 / 2500	51.8 / 2250	51.8 / 2250	35.4 / 2450	46.2 / 2200	35.4 / 2450	46.2 / 2200	35.4 / 2450	46.2 / 2200	46.2 / 2200	54.4 / 2200	46.2 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200	54.4 / 2200			
	Max. Rated Torque / rpm to DIN 70020	Nm/rpm	131 / 1800	131 / 180																													