



INOMA Series
1.5-3.5 Tons
F(D)(G)M15-35(C)P(T)(D)(H)



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These products and specifications are subject to change without notice.
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Features and specifications may vary depending on markets.
Performance data and dimensions are nominal and subject to tolerances.
Produced in ISO certified factory.

PRESENTED BY:

ENGINEERED FOR YOUR OPERATIONAL EXCELLENCE



Streamlined Maintenance Locations for Effortless Examination and Care

Effortless inspection and maintenance are made possible through an extendable engine hood, detachable side panels, and strategically centralized maintenance stations. Additionally, intervals between oil changes and lubrication needs contribute to decreased maintenance expenses.

DEFINING NEW BENCHMARKS

A Progressive Leap into Advanced Performance

Through the integration of technologies, the **TCM *iNOMA*** series introduces a new era of superior capabilities, while upholding environmental stewardship. The advanced engine system within the ***iNOMA*** lineup embodies exceptional fuel efficiency and ultra-low emissions, surpassing global environmental standards. Beyond its innovative engine, **TCM Forklift Trucks** prioritise operator comfort and elevated safety. Each ***iNOMA*** forklift seamlessly incorporates a system for heightened safety and accident prevention. Enhanced by LCD graphic displays and digital monitoring systems, the ***iNOMA*** series exemplifies enhanced safety and efficiency. This is the future of forklifts, available today.



FULFILLING ENVIRONMENTAL DEMANDS OF TODAY AND TOMORROW

Innovative Electronically Controlled Gasoline Engine

TCM *iNOMA*'s offers electronic control engine as a standard, for this entire range of gasoline trucks. The *iNOMA* model achieves remarkable environmental standards while upholding exceptional performance and reliability levels. Furthermore, the engine comes equipped with wheelspin suppression to improve fuel efficiency and reduce torque loss.



Dual-Level High / Low Speed Limiter

The *iNOMA*'s automatic speed limiter offers two levels – **outdoor (HIGH)** and **indoor (LOW)**. Operators can easily switch between these speed limits, tailoring fuel efficiency to the specific location's demands.

Power / Efficiency Mode Switch

For diverse tasks, two power levels are available: **POWER mode**, maximising power output, and **SOFT mode** for optimal fuel efficiency and reduced noise levels.

High Dependability Diesel Engine

Retaining the well-regarded performance levels of the esteemed TCM Diesel Engine, the *iNOMA* series now integrates eco-friendly enhancements. These upgraded engines achieve low emission levels without compromising horsepower or reliability.

Serene Design for Maximum Comfort and Reduced Fatigue

With attributes such as a low-noise engine, heightened engine compartment soundproofing, and floor-level noise dampening, **TCM Forklift Trucks** have created a serene working environment for both operators and the surrounding workspace.

Steering Synchronizer

Equipped with full hydrostatic steering, steering becomes effortless, yet maintaining a straight trajectory can be challenging without constant adjustments. Such challenges are particularly pronounced in confined spaces like containers. The steering synchronizer proactively detects and eliminates misalignments, ensuring steady motion without the need for continuous steering wheel adjustments.

With Steering Synchroniser

TRAVEL DIRECTION

Without Steering Synchroniser

* Difficulty in maintaining a straight line while driving

TRAVEL DIRECTION

PRIORITIZING SAFETY: INNOVATIVE AND DEPENDABLE SAFETY INNOVATIONS

Integrated System for Safety

The TCM *iNOMA* model is equipped with an Integrated System, an integrated active safety solution meticulously designed to enhance vehicle safety by proactively detecting issues before they escalate into accidents. This system not only ensures safety during vehicle operation but also prevents errors when the operator is not seated, thus safeguarding both the operator and the work environment from potential mishaps.

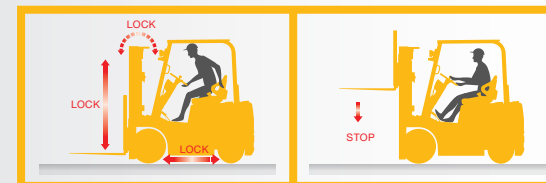
Seamlessly Incorporated Digital Monitoring

Within the cab, digital displays offer simplified monitoring of systems and controls. Illuminating upon ignition activation, the digital panel provides quick assessments of speed, load weight, and system status.



Mast and Travel Interlock

TCM *iNOMA* forklifts are outfitted with a mast and travel interlock protection mechanism linked to the operator's seat. When the operator is not seated, this mechanism automatically locks the mast and, for torque-converter models, the vehicle's movement itself, preventing potential injury or property damage.



Secure Lift Lock

The fork on TCM *iNOMA* models is automatically locked upon ignition deactivation, ensuring it remains in position even if the lift lever is accidentally nudged or shifted.

Neutral Safety Assurance

Present in all vehicles, encompassing both torque-converter-equipped and direct drive models, an embedded Neutral Safety mechanism prevents engine ignition unless the forward/backward lever is in neutral.

Broad Forward Visibility, Clear Rear View

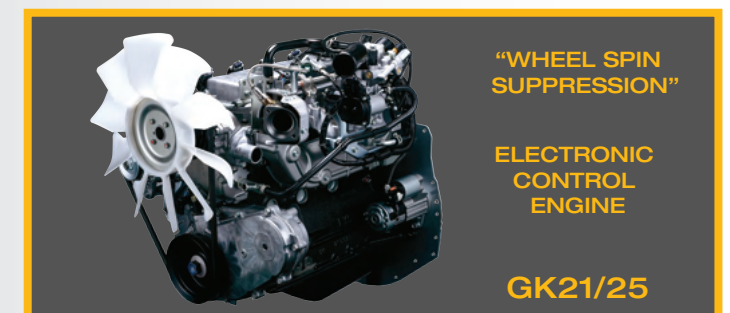
Distinguishing itself from some forklifts, TCM *iNOMA* models offer expansive front visibility extending from fork tip to mast apex. Improved rear visibility is achieved through the compact tail design of the *iNOMA* series.

Elevated Rear Combination Lighting

All TCM *iNOMA* models are equipped with high-mounted rear combination lamps positioned above the protective head guard, providing unmistakable braking and stopping signals to trailing vehicles and pedestrians.

Wheel Spin Suppression Adaption Function (Gasoline Electronic Engine)

- 1) The throttle is set to operate slowly in response to pressing on the accelerator, so that the throttle is not fully activated even when the accelerator is fully pressed down. Reduce loss torque such as torque control stall by gradually open the throttle with slope in consideration of power performance and the accelerator opening features.
- 2) Optimized throttle opening to improve fuel efficiency. Conventionally, over-speeding above the rated speed of 2,700 rpm was controlled by retarding the ignition timing. => The above two controls reduce unnecessary fuel injection and improve fuel efficiency.



EXCELLENT PERFORMANCE, POWERFUL LIFTING CAPACITY

TCM forklift trucks are constructed with a low centre of gravity frame that optimises 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)



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

Soft Landings

Another exclusive feature found on the TCM *INOMA* is a soft landing system that activates when the fork nears the ground, automatically protecting loads from hard drops or shocks. (Only for two-stage mast)

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.



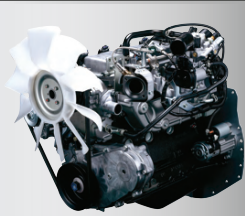
OPTIONAL COMPONENTS

• ENGINE CUT OFF FUNCTION (AUTO STOP)

Prevent idling.
Default: 60 seconds setting.

- Engine Stop
- Power off for electric components connected to electric circuit below ignition switch such as meter panel, engine and so on.
- Excepted components; VCM, lamps and horn.

Reduces excess fuel consumption due to unnecessary idling.



GASOLINE/LPG
ENGINE
GK21/25

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.
- Switches** for optional functions positioned on the right side of the dashboard.
- Acrylic roof** (Option) 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 absorbing rubber mounts.
- Fully hydraulic power steering.** The full hydraulic steering allows for effortless steering even if the truck is in a stationary position.
- Colour display.** The LCD colour display provides a visually clear interface, making it easy to read and interpret essential operator signals.



OPTIONAL COMPONENTS

• FINGERTIP CONTROL LEVER / ARMREST FNR SWITCH

Forward and Reverse Switching (FNR switch controller) at armrest will be replaced as the Standard setting. (If the FNR switch is attached, there is no forward and backward switching lever under the steering.)

Fingertip control. A function that allows cargo handling operations such as lifts and tilts to be performed with fingertip operation. This can be operated with arm on the armrest.



• SINGLE CONTROL LEVER

Lift up/down and tilt forward/backward operation with a single lever.

• SMOOTH-RUN SYSTEM

Reduces the vibration of the load during lift operation and driving to prevent the load from collapsing. An accumulator is mounted on the step.

• TILT HORIZONTAL CONTROL

Tilt horizontal control button enables tilt forward stops at horizontal position of forks. By pressing the **tilt horizontal** support button while operating the lever, difficult tilt horizontal work can be easily performed.

• LASER POINTER

Laser pointer is indicated when the fork is in horizontal position, making it possible to visually grasp the fork height. (The LED lamp attached to the mast indicates that it is horizontal.)

• SMOOTH SHIFT

**This option is only available only for gasoline truck with torque converter transmission.*
(Transmission Full Reverse Protection)

Transmission protection function.

a. A function that changes shifts only when a truck speed is low (4.5 km/h or less). It is necessary to release the accelerator once to change shifts.

Sudden Starts Prevention Function

b. When Forward or Reverse is applied, the gear does not switch to Forward or Reverse while the engine speed is high.

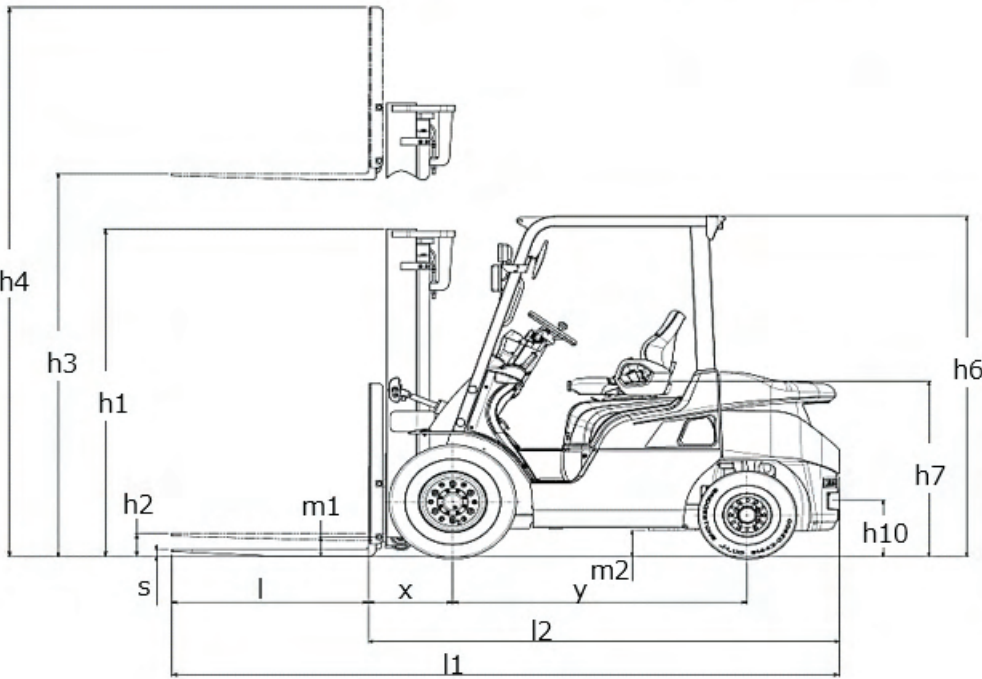
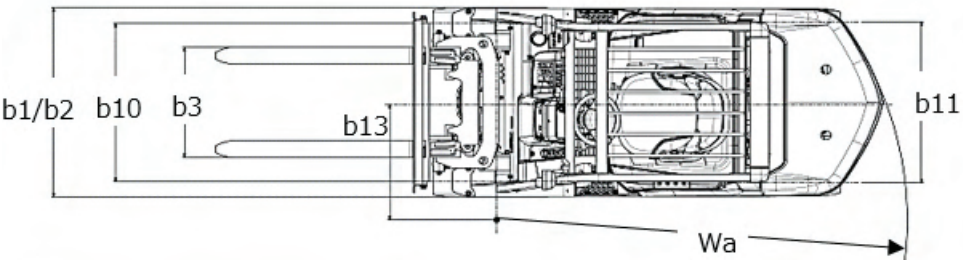


SPECIFICATIONS

CHARACTERISTICS									
1.1	Manufacturer (abbreviation)				TCM	TCM	TCM	TCM	TCM
1.2	Manufacturer's model designation				FDM15P(T)(D)	FDM18P(T)(D)	FDM20CP(T)(D)	FDM20P(T)(D)	FDM25P(T)(D)
1.3	Power source: Battery, Diesel, LPG, Petrol				Diesel	Diesel	Diesel	Diesel	Diesel
1.4	Operator type: pedestrian, (operator)-standing, -seated				Seated	Seated	Seated	Seated	Seated
1.5	Load capacity	Q	kg		1500	1750	2000	2000	2500
1.6	Load center distance	c	mm		500	500	500	500	500
1.7	Load distance, axle to fork face	x	mm		400	400	415	455	460
1.8	Wheelbase	y	mm		1400	1400	1400	1600	1600
WEIGHTS									
2.1	Truck weight without load / including battery (simplex mast, lowest lift height)			kg	2530	2720	3030	3380	3680
2.2	Axle loading with maximum load, front/rear (simplex mast, lowest lift height)			kg	3520/510	3880/590	4330/700	4640/740	5430/750
2.3	Axle loading without load, front/rear (simplex mast, lowest lift height)			kg	1060/1470	1000/1720	1020/2010	1450/1930	1430/2250
WHEELS, DRIVE TRAIN									
3.1	Tyres: V=solid, L=pneumatic, SE=solid pneumatic - front/rear				L / L	L / L	SE / SE	L / L	L / L
3.2	Tyre dimensions, front				6.50-10	6.50-10	6.50-10/5.00	7.00-12	7.00-12
3.3	Tyre dimensions, rear				5.00-8	5.00-8	5.00-8/3.00	6.00-9	6.00-9
3.4	Number of wheels, front/rear (x=driven)				2x / 2	2x / 2	2x / 2	2x / 2	2x / 2
3.5	Track width (center of tyres), front	b10	mm		890	890	890	960	960
3.6	Track width (center of tyres), rear	b11	mm		900	900	900	980	980
DIMENSIONS									
4.1	Mast tilt, forwards/backwards		∅/β	°	6/12	6/12	6/12	6/12	6/12
4.2	Height with mast lowered (see tables)		h1	mm	1990	1990	1990	1990	2015
4.3	Free lift (see tables)		h2	mm	115	115	120	140	140
4.4	Lift height (see tables)		h3	mm	3000	3000	3000	3000	3000
4.5	Overall height with mast raised		h4	mm	4055	4055	4055	4055	4055
4.6	Height to top of overhead guard		h6	mm	2065	2065	2065	2074	2074
4.7	Seat height		h7	mm	929	929	929	938	938
4.8	Tow coupling height		h10	mm	290	290	290	310	310
4.9	Overall length		l1	mm	3180	3220	3275	3405	3480
4.10	Length to fork face (includes fork thickness)		l2	mm	2260	2300	2355	2485	2560
4.11	Overall width		b1/b2	mm	1065 / 1480	1065 / 1480	1065 / -	1150 / 1640	1150 / 1640
4.12	Fork dimensions (thickness, width, length)		s/e/l	mm	35x100x920	35x100x920	45x100x920	45x100x920	45x100x920
4.13	Fork carriage to DIN 15 173 A/B/no				2A	2A	2A	2A	3A
4.14	Fork carriage width		b3	mm	920	920	920	1000	1000
4.15	Ground clearance under mast, with load		m1	mm	110	110	110	115	115
4.16	Ground clearance at center of wheelbase, with load (forks lowered)		m2	mm	150	150	150	160	160
4.17	Working aisle width with 1000 x 1200 mm pallets, crosswise		Ast	mm	3550	3580	3635	3855	3890
4.18	Working aisle width with 800 x 1200 mm pallets, crosswise		Ast	mm	3350	3380	3435	3655	3690
4.19	Working aisle width with 800 x 1200 mm pallets, lengthwise				3750	3780	3835	4055	4090
4.20	Turning circle radius		Wa	mm	1950	1980	2020	2200	2230
4.21	Minimum distance between centers of rotation		b13	mm	555	555	555	715	715
PERFORMANCE									
5.1	Travel speed, with/without load			km/h	18.5/19.0	18.5/19.0	18.5/19.0	18.0/18.5	18.0/18.5
5.2	Lifting speed, with/without load			m/s	0.64/0.66	0.64/0.66	0.64/0.66	0.61/0.64	0.61/0.64
5.3	Lowering speed, with/without load			mls	0.52/0.45	0.52/0.45	0.52/0.45	0.51/0.45	0.51/0.45
5.4	Rated drawbar pull, with load (Powershift)			N	12800	12700	12600	15800	15600
5.5	Rated drawbar pull, without load (Powershift)			N	6800	6500	6500	9400	9300
5.6	Rated drawbar pull, with load (Manual)			N	11100	11100	10900	14100	14000
5.7	Gradeability, with load (Powershift)			%	34	30	26	31	27
5.8	Gradeability, with load (Manual)			%	29	26	22	28	23
5.9	Services brakes (mechanical/hydraulic/electric/pneumatic)			s	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
IC Engine									
6.1	Manufacturer / Type				S4Q2	S4Q2	S4Q2	S4S	S4S
6.2	Rated / Nominal output to ISO 1585**			kW	30.0	30.0	30.0	38.1	38.1
6.3	Rated speed to DIN 70 020			rpm	2500	2500	2500	2250	2250
6.4	Number of cylinders / cubic capacity			cm³	4 / 2505	4 / 2505	4 / 2505	4 / 3331	4 / 3331
6.5	Fuel consumption according to VDI 80 cycle			l/h / kg/h	2.30/-	2.35/-	2.35/-	2.55/-	3.20/-
6.6	Max torque			Nm	131	131	131	185	185
6.7	Max torque at engine speed			rpm	1800	1800	1800	1700	1700
MISCELLANEOUS									
7.1	Type of drive control				Powershift 1/1	Powershift 1/1	Powershift 1/1	Powershift 1/1	Powershift 1/1
7.2	Maximum operating pressure for attachments			bar	180	180	180	180	180
7.3	Oil flow for attachments			l/min	62	62	62	75	75
7.4	Noise level, value at operator's ear (EN 12053)			dB(A)	80	80	80	78	78
7.5	Towing coupling design / DIN type, ref.				pin	pin	pin	pin	pin

F(D)(G)M15~35(C)P(T)(D)(H)

INOMA SERIES



SPECIFICATIONS

CHARACTERISTICS											
1.1	Manufacturer (abbreviation)				TCM	TCM	TCM	TCM	TCM	TCM	TCM
1.2	Manufacturer's model designation				FGM15P(T)(D)	FGM18P(T)(D)	FGM20CP(T)(D)	FGM20P(T)(D)	FGM20P(T)(D)H	FGM25P(T)(D)	FGM30P(T)(D)
1.3	Power source: Battery, Diesel, LPG, Petrol				Petrol/LPG	Petrol/LPG	Petrol/LPG	Petrol/LPG	Petrol/LPG	Petrol/LPG	Petrol/LPG
1.4	Operator type: pedestrian, (operator)-standing, -seated				Seated	Seated	Seated	Seated	Seated	Seated	Seated
1.5	Load capacity	Q	kg		1500	1750	2000	2000	2000	2500	3000
1.6	Load center distance	c	mm		500	500	500	500	500	500	500
1.7	Load distance, axle to fork face	x	mm		400	400	415	455	455	460	495
1.8	Wheelbase	y	mm		1400	1400	1400	1600	1600	1600	1700
WEIGHTS											
2.1	Truck weight without load / including battery (simplex mast, lowest lift height)			kg	2490	2690	3010	3300	3300	3600	4240
2.2	Axle loading with maximum load, front/rear (simplex mast, lowest lift height)			kg	3510/460	3870/540	4320/660	4600/670	4600/670	5390/680	5390/680
2.3	Axle loading without load, front/rear (simplex mast, lowest lift height)			kg	1040/1430	990/1670	1010/1970	1410/1860	1410/1860	1390/2180	1390/2180
WHEELS, DRIVE TRAIN											
3.1	Tyres: V=solid, L=pneumatic, SE=solid pneumatic - front/rear				L / L	L / L	SE / SE	L / L	L / L	L / L	L / L
3.2	Tyre dimensions, front				6.50-10	6.50-10	6.50-10/5.00	7.00-12	7.00-12	7.00-12	7.00-12
3.3	Tyre dimensions, rear				5.00-8	5.00-8	5.00-8/3.00	6.00-9	6.00-9	6.00-9	6.00-9
3.4	Number of wheels, front/rear (x=driven)				2x / 2	2x / 2	2x / 2	2x / 2	2x / 2	2x / 2	2x / 2
3.5	Track width (center of tyres), front			b10	mm	890	890	890	890	960	960
3.6	Track width (center of tyres), rear			b11	mm	900	900	900	900	980	980
DIMENSIONS											
4.1	Mast tilt, forwards/backwards			∂/β	°	6/12	6/12	6/12	6/12	6/12	6/12
4.2	Height with mast lowered (see tables)			h1	mm	1990	1990	1990	1990	1990	2015
4.3	Free lift (see tables)			h2	mm	115	115	120	140	140	145
4.4	Lift height (see tables)			h3	mm	3000	3000	3000	3000	3000	3000
4.5	Overall height with mast raised			h4	mm	4055	4055	4055	4055	4055	4055
4.6	Height to top of overhead guard			h6	mm	2065	2065	2065	2074	2074	2093
4.7	Seat height			h7	mm	929	929	929	938	938	988
4.8	Tow coupling height			h10	mm	290	290	290	310	310	310
4.9	Overall length			l1	mm	3180	3220	3275	3405	3405	3480
4.10	Length to fork face (includes fork thickness)			l2	mm	2260	2300	2355	2485	2485	2560
4.11	Overall width			b1/b2	mm	1065/-	1065/-	1065/-	1150 / 1640	1150 / 1640	1150 / 1640
4.12	Fork dimensions (thickness, width, length)			s/e/l	mm	35x100x920	35x100x920	45x100x920	45x100x920	45x100x920	45x100x920
4.13	Fork carriage to DIN 15 173 A/B/no					2A	2A	2A	2A	2A	3A
4.14	Fork carriage width			b3	mm	920	920	920	1000	1000	1000
4.15	Ground clearance under mast, with load			m1	mm	110	110	110	115	115	135
4.16	Ground clearance at center of wheelbase, with load (forks lowered)			m2	mm	150	150	150	160	160	190
4.17	Working aisle width with 1000 x 1200 mm pallets, crosswise			Ast	mm	3550	3580	3635	3855	3855	3890
4.18	Working aisle width with 800 x 1200 mm pallets, crosswise			Ast	mm	3350	3380	3435	3655	3655	3690
4.19	Working aisle width with 800 x 1200 mm pallets, lengthwise					3750	3780	3835	4055	4055	4090
4.20	Turning circle radius			Wa	mm	1950	1980	2020	2200	2200	2230
4.21	Minimum distance between centers of rotation			b13	mm	555	555	555	715	715	715
PERFORMANCE											
5.1	Travel speed, with/without load			km/h		19.0/19.5	19.0/19.5	19.0/19.5	18.5/19.0	18.5/19.0	18.5/19.0
5.2	Lifting speed, with/without load			m/s		0.63/0.64	0.63/0.64	0.63/0.64	0.58/0.58	0.64/0.64	0.58/0.58
5.3	Lowering speed, with/without load			mls		0.52/0.45	0.52/0.45	0.52/0.45	0.51/0.45	0.51/0.45	0.51/0.45
5.4	Rated drawbar pull, with load (Powershift)			N		13800/14600	13700/14600	13500/14400	13800/14700	16100/17300	13600/14500
5.5	Rated drawbar pull, without load (Powershift)			N		6800/6800	6400/6400	6500/6500	9100/9100	9100/9100	9000/9000
5.6	Rated drawbar pull, with load (Manual)			N		12100/13400	12100/13500	11900/13100	12200/13400	17000/18100	12000/13400
5.7	Gradeability, with load (Powershift)			%		38/40	33/36	29/31	28/30	33/35	23/25
5.8	Gradeability, with load (Manual)			%		32/36	29/32	25/27	24/26	34/37	20/22
5.9	Services brakes (mechanical/hydraulic/electric/pneumatic)			s		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
IC Engine											
6.1	Manufacturer / Type					GK21	GK21	GK21	GK21	GK25	GK21
6.2	Rated / Nominal output to ISO 1585**			kW		36.0	36.0	36.0	36.0	42.0	36.0
6.3	Rated speed to DIN 70 020			rpm		2700	2700	2700	2700	2700	2700
6.4	Number of cylinders / cubic capacity			cm³		4 / 2065	4 / 2065	4 / 2065	4 / 2065	4 / 2488	4 / 2065
6.5	Fuel consumption according to VDI 60 cycle			l/h / kg/h		- / 2.70	- / 3.00	- / 3.40	- / 3.60	- / 3.90	- / 4.10
6.6	Max torque			Nm		149	149	149	149	185	149
6.7	Max torque at engine speed			rpm		1800	1800	1800	1800	1400	1800
MISCELLANEOUS											
7.1	Type of drive control					Powershift 1/1	Powershift 1/1	Powershift 1/1	Powershift 1/1	Powershift 1/1	Powershift 1/1
7.2	Maximum operating pressure for attachments			bar		180	180	180	180	180	180
7.3	Oil flow for attachments			l/min		60	60	60	60	60	60
7.4	Noise level, value at operator's ear (EN 12053)			dB(A)		79	79	79	79	79	79
7.5	Towing coupling design / DIN type, ref.					pin	pin	pin	pin	pin	pin

F(D)(G)M15~35(C)P(T)(D)(H)

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