

**Excellent driving stability, due to extremely low centre of gravity and rear axle.**

**Large capacity industrial engines which deliver high torque at low speeds**

**Hydrodynamic drive unit provides efficient acceleration and direction changes**

**Cushion mounted drive unit minimises vibration to the operator**

**Comfortable and safe operator's cab featuring exemplary ergonomics**



## **DFG/TFG 425–435**

### **Diesel and gas forklifts with hydrodynamic drive units (2500, 3000, 3500 kg)**

Jungheinrich hydrodynamic diesel and gas forklift trucks give an incredible handling capacity in a variety of applications. The hydrodynamic drive performs especially well in medium to long distance operations and also ensures smooth shock-free drive from rest.

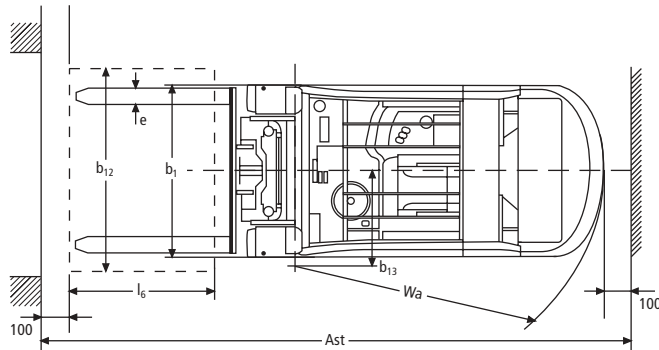
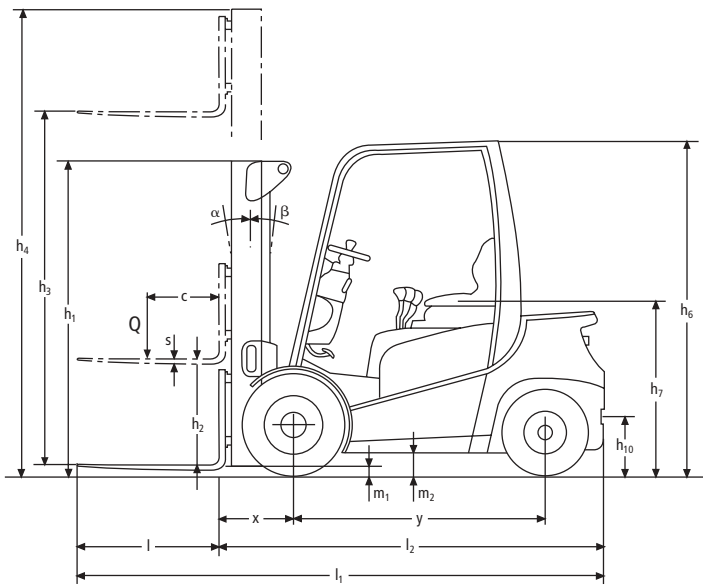
Large capacity industrial engines generate high torque even at low speeds, giving the benefit of lower fuel consumption and noise. These robust

engines are specially designed for use in forklift trucks, ensuring high reliability and a long service life even for tough applications.

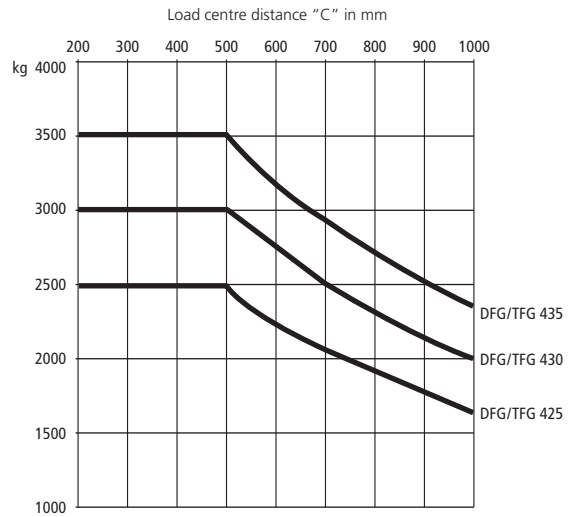
All the engines feature low emissions and comply with the future EU Directives. The gas versions are fitted as standard with a catalytic converter. A closed-loop 3-way catalytic converter (TFG) and various particulate filter systems (DFG) are available as options.

The operator's cab has an ergonomic layout and is designed around the operator. This ensures safety, protects health and enables the operator to concentrate fully on his work whilst being in a relaxed & stress free environment. Overall this ensures maximum productivity for arduous shifts.

# DFG/TFG 425–435



## Capacity



Mast table DFG/TFG 425–435													Capacity table (kg) c = 500 mm		
Designation	Lift h <sub>3</sub> mm		Free lift h <sub>2</sub> mm			Closed mast height h <sub>1</sub> (mm)		Max. height h <sub>4</sub> mm			Tilt forward/ backward α/β (°)		without sideshift, single solid tyres		
	DFG/TFG 425/430	435	425	DFG/TFG 430	435	DFG/TFG 425/430	435	425	DFG/TFG 430	435	DFG/TFG 425/430	435	425	DFG/TFG 430	435
Two-stage ZT	2900	2900	150	150	150	2115	2228	3510	3670	3683	6/8	6/8	2500	3000	3500
	3100		150	150		2215		3710	3870		6/8		2500	3000	
	3300	3300	150	150	150	2315	2428	3910	4070	4083	6/8	6/8	2500	3000	3500
	3500		150	150		2415		4110	4270		6/8		2500	3000	
	3700	3800	150	150	150	2515	2678	4310	4470	4583	6/8	6/8	2500	3000	3500
	4000		150	150		2665		4610	4770		6/8		2500	3000	
	4300	4300	150	150	150	2865	2978	4910	5070	5083	6/8	6/8	2500	3000	3500
	4500		150	150		2965		5110	5270		6/8		2500	3000	
	4700	4800	150	150	150	3065	3228	5310	5470	5583	6/6	6/6	2500	3000	3500
	5000		150	150		3215		5610	5770		6/6		2500	3000	
5500		150	150		3515		6110	6270		6/6					
5800		150	150		3665		6410	6570		6/6					
6000		150	150		3765		6610	6770		6/6					
Two-stage ZZ	2900		1480	1380		2080		3500	3600		6/8		2500	3000	
	3100		1580	1480		2180		3700	3800		6/8		2500	3000	
	3300		1680	1580		2280		3900	4000		6/8		2500	3000	
	3500		1780	1680		2380		4100	4200		6/8		2500	3000	
	3700		1880	1780		2480		4300	4400		6/8		2500	3000	
	4000		2030	1930		2630		4600	4700		6/8		2500	3000	
	4300		2230	2130		2830		4900	5000		6/8		2500	3000	
4500		2330	2230		2930		5100	5200		6/8		2500	3000		
Three-stage DZ	4400		1480	1380		2080		5000	5100		6/8		2500	3000	
	4700	4500	1580	1480	1430	2180	2193	5300	5400	5263	6/6	6/6	2500	3000	3500
	5000	4800	1680	1580	1530	2280	2293	5600	5700	5563	6/6	6/6	2500	3000	3500
	5500	5300	1880	1780	1730	2480	2493	6100	6200	6063	6/6	6/6	2400	2900	3400
	6000	5800	2080	1980	1930	2680	2693	6600	6700	6563	6/6	6/6	2000	2700	2750
	6500	6300	2280	2180	2130	2880	2893	7100	7200	7063	6/6	6/6			2600
	7000		2480	2380		3080		7600	7700		6/6			2150	

# Technical Data in line with VDI 2198 as at: 09/2005

		Jungheinrich		Jungheinrich		Jungheinrich						
		DFG 425	TFG 425	DFG 430	TFG 430	DFG 435	TFG 435					
Identification	1.1	Manufacturer (abbreviation)		Jungheinrich		Jungheinrich		1.1				
	1.2	Manufacturer's type designation		DFG 425	TFG 425	DFG 430	TFG 430	DFG 435	TFG 435	1.2		
	1.3	Drive (electric – battery or mains, diesel, petrol, fuel gas, manual)		diesel	fuel gas	diesel	fuel gas	diesel	fuel gas	1.3		
	1.4	Type of operation (hand, pedestrian, standing, seated, order picker)		seated		seated		seated		1.4		
	1.5	Load capacity/rated load	Q (t)	2.5		3		3.5		1.5		
	1.6	Load centre distance	c (mm)	500		500		500		1.6		
	1.8	Load distance, centre of drive axle to fork	x (mm)	473 <sup>1)</sup>		515 <sup>2)</sup>		520 <sup>3)</sup>		1.8		
	1.9	Wheelbase	y (mm)	1685		1685		1785		1.9		
	Weights	2.1	Service weight	kg	4290	4190	4730	4630	5028	4928	2.1	
2.2		Axle loading, laden front/rear	kg	5990/800	5950/740	6960/907	6920/847	7530/1000	7490/940	2.2		
2.3		Axle loading, unladen front/rear	kg	2050/2240	2010/2180	2078/2719	2038/2659	2028/3000	1988/2940	2.3		
Wheels, Chassis	3.1	Tyres (solid rubber, superelastic, pneumatic, polyurethane)		SE		SE		SE		3.1		
	3.2	Tyre size, front		7.00x12		28x9-15		250x15		3.2		
	3.3	Tyre size, rear		6.50x10		6.50x10		6.50x10		3.3		
	3.5	Wheels, number front/rear (x = driven wheels)		2x/2		2x/2		2x/2		3.5		
	3.6	Track width, front	b <sub>10</sub> (mm)	990		1060		1060		3.6		
	3.7	Track width, rear	b <sub>11</sub> (mm)	942		942		952		3.7		
	Basic Dimensions	4.1	Mast/fork carriage tilt forward/backward		α/β (°)		6/8		6/8		4.1	
4.2		Lowered mast height		h <sub>1</sub> (mm)		2280		2215		4.2		
4.3		Free lift		h <sub>2</sub> (mm)		150		150		4.3		
4.4		Lift height		h <sub>3</sub> (mm)		3300		2900		4.4		
4.5		Extended mast height		h <sub>4</sub> (mm)		3910		3670		4.5		
4.7		Overhead load guard (cab) height		h <sub>6</sub> (mm)		2220		2250		4.7		
4.8		Seat height/standing height		h <sub>7</sub> (mm)		1082		1112		4.8		
4.12		Coupling height		h <sub>10</sub> (mm)		380		380		4.12		
4.19		Overall length		l <sub>1</sub> (mm)		3690		3810		4.19		
4.20		Length to face of forks		l <sub>2</sub> (mm)		2540		2660		4.20		
4.21		Overall width		b <sub>1</sub> (mm)		1174/–		1300/–		4.21		
4.22		Fork dimensions		s/e/l (mm)		40/120/1150		45/125/1150		4.22		
4.23		Fork carriage ISO 2328, class/type A, B		2 A		3 A		3 A		4.23		
4.24		Fork carriage width		b <sub>3</sub> (mm)		1120		1120		4.24		
4.31		Ground clearance, laden, under mast		m <sub>1</sub> (mm)		125		140		4.31		
4.32		Ground clearance, centre of wheelbase		m <sub>2</sub> (mm)		130		165		4.32		
4.33		Aisle width for pallets 1000x1200 crossways		Ast (mm)		3963		4085		4.33		
4.34		Aisle width for pallets 800x1200 lengthways		Ast (mm)		4163		4285		4.34		
4.35		Turning radius		Wa (mm)		2290		2370		4.35		
4.36	Smallest pivot point distance		b <sub>13</sub> (mm)		725		725		4.36			
Performance Data	5.1	Travel speed, laden/unladen		km/h		17/19		18/19		5.1		
	5.2	Lift speed, laden/unladen		m/s		0.53/0.60	0.50/0.60	0.53/0.60	0.45/0.60	0.49/0.54	0.41/0.53	5.2
	5.3	Lowering speed, laden/unladen		m/s		0.55/0.45		0.55/0.45		0.55/0.42		5.3
	5.5	Drawbar pull, laden/unladen		N		17300/–	17100/–	17150/–	16500/–	17000/–	16000/–	5.5
	5.7	Gradient performance, laden/unladen		%		27/–	27/–	23/–	23/–	18/–	19/–	5.7
	5.9	Acceleration time, laden/unladen		s		4.9/4.3	5.4/4.7	5.6/4.8	6.1/5.1	5.7/4.9	6.3/5.4	5.9
	5.10	Service brake				mechanic/hydraulic		mechanic/hydraulic		mechanic/hydraulic		5.10
V-Motor	7.1	Engine manufacturer/type		Mitsubishi S4S	Nissan K25	Mitsubishi S4S	Nissan K25	Mitsubishi S4S	Nissan K25	7.1		
	7.2	Engine power acc. to ISO 1585		kW		41.2	36	41.2	36	41.2	36	7.2
	7.3	Rated speed		min <sup>-1</sup>		2200	2100	2200	2100	2200	2100	7.3
	7.4	No. of cylinders/cubic capacity		/cm <sup>3</sup>		4/3331	4/2488	4/3331	4/2488	4/3331	4/2488	7.4
	7.5	Fuel consumption acc. to VDI cycle		l/h, kg/h		2.5 <sup>4)</sup>	2.6 <sup>5)</sup>	2.7 <sup>6)</sup>	2.8 <sup>7)</sup>	2.9 <sup>8)</sup>	3.0 <sup>9)</sup>	7.5
Others	8.2	Operating pressure for attachments		bar		160		160		160		8.2
	8.3	Oil volume for attachments		l/min		60		60		60		8.3
	8.4	Sound level at driver's ear according to EN 12053		dB(A)		78		78		78		8.4
	8.5	Tow coupling, type DIN				DIN 15170/type H		DIN 15170/type H		DIN 15170/type H		8.5.1)
	1) 498 mm for DZ mast; with integrated sideshift: x = 485 mm (510 mm for DZ mast); with SS attachment: x = 532 mm (557 mm for DZ mast) 2) 540 mm for DZ mast; with integrated sideshift: x = 529 mm (554 mm for DZ mast); with SS attachment: x = 587 mm (612 mm for DZ mast) 3) 545 mm for DZ mast; with integrated sideshift: x = 534 mm (559 mm for DZ mast); with SS attachment: x = 592 mm (617 mm for DZ mast) 4) at 45 VDI work cycles/h – 3.5 l at 60 VDI work cycles/h 5) at 45 VDI work cycles/h – 3.6 l at 60 VDI work cycles/h 6) at 45 VDI work cycles/h – 3.8 l at 60 VDI work cycles/h 7) at 45 VDI work cycles/h – 3.9 l at 60 VDI work cycles/h 8) at 45 VDI work cycles/h – 4.0 l at 60 VDI work cycles/h 9) at 45 VDI work cycles/h – 4.1 l at 60 VDI work cycles/h											

This specification sheet according to VDI regulation 2198 only provides technical values for the standard truck. Non-standard tyres, different masts, additional equipment, etc. could produce other values. Right reserved for technical changes and improvements.

# Make use of the advantages

## Ergonomic operator's cab

The comfortable operator's cab helps maximise the operator's work capacity and offers outstanding ergonomics:

- Large visible step provides easy and safe mounting and dismounting from the cab.
- Anti-vibration mounted drive unit reduces vibration and noise.
- Deluxe seat can be adjusted in three ways.
- Infinitely adjustable steering column.
- Large, comfortable footwell with automotive style pedal layout.
- Expansive, roomy cab.
- Hydraulic levers and directional control are ergonomically positioned to the right of the operator.
- Excellent forward visibility through panoramic mast and carriage.
- Clear visible analogue instrument panel, which has extensive warning and control lights.
- Comfortable working environment in all weathers through cabs (optional) in various designs.

## Strong motors

Large capacity industrial engines, specially designed for the requirements of forklift trucks provide power in every situation:

- 3.3l Diesel motor with 41.2 kW output and maximum torque of 41 kW at 2000 rpm. Clean emission and quiet running through indirect injection.
- 2.5l Otto motor with 36 kW output and maximum torque of 180 Nm at 1400 rpm.
- Long service life due to robust construction and low engine speed
- 500 hour servicing interval.
- Low soot emission (Diesel stacker). Various types of soot filter systems (optional).
- 58l Diesel tank integrated in chassis.
- Downward direction of exhaust (upward direction optional).
- Easy access for maintenance and service through one-piece motor cover with wide opening angle to the rear and removable floor plate.

## Highly loadable hydrodynamic transmission

The hydrodynamic drive unit has an automatic power shift transmission enabling:

- Optimised power transfer, with maximum effectiveness for medium and high speeds.

- Sensitive and shock-free power transfer.
- Combined crawl speed/brake pedal allows sensitive driving while under full lifting performance.

## Protected electric installation

- 12 Volt battery with 72 Ah.
- 50 A 3-phase AC dynamo.
- Otto motor with maintenance-free, non-contacting transistor ignition. The complete electrics are protected against water and dust according to IP 54 and accessibly mounted on the overhead load guard console.

## Tyres for every application

- Superelastic tyres as standard.
- Pneumatic tyres, wide tyres and non-chalking SE tyres are available as an option.

### 2,5 t

Front axle			Track width	Truck width
Tyre type	No.	Size		
SE tyres	2	7.00-12	990	1174
Pneumatic tyres	2	7.00-12	990	1174
SE wide track	2	27x10-12	1048,5	1321

Rear axle			Track width
Tyre type	No.	Größe	width
SE tyres	2	6.50-10	940
Pneumatic tyres	2	6.50-10	940
SE wide track	2	23x9-10	940

### 3,0 t

Front axle			Track width	Truck width
Tyre type	No.	Size		
SE tyres	2	28x9-15	1060	1300
Pneumatic tyres	2	28x9-15	1060	1300
SE wide track	2	250x15	1060	1300

Rear axle			Track width
Tyre type	No.	Size	width
SE tyres	2	6.50-10	940
Pneumatic tyres	2	6.50-10	940
SE wide track	2	23x9-10	940

### 3,5 t

Front axle			Track width	Truck width
Tyre type	No.	Size		
SE tyres	2	250x15	1060	1300
Pneumatic tyres	2	250x15	1060	1300
SE wide track	2	250x15	1060	1300

Rear axle			Track width
Tyre type	No.	Size	width
SE tyres	2	6.50-10	950
Pneumatic tyres	2	6.50-10	950
SE wide track	2	23x9-10	950

## Precise steering

Requirement-controlled hydrostatic steering for effortless, precise steering without steering return kicks.

- Hydraulic steering provides low effort shock free steering, for maximum operator comfort and safety. 4 turns on steering wheel lock to lock.
- Steering axle mounted high in the chassis with integrated steering cylinder for maximum stability.

## Safe braking

Two independent braking systems act on the front wheels.

- Foot brake: hydraulically supported drum brake with asbestos-free linings and warning light for brake fluid indication.
- Parking brake: hand-operated cable-pull brake with operation warning light.

## Reliable hydraulics

The highly efficient filter system ensures clean oil and thus prolongs the lifespan of all components:

- Suction filter and filter in the return line.
- 55 l hydraulics tank integrated in chassis.
- The hydraulic tank is vented through a filter.
- Pressure limiting valves prevent excessive pressure and overloads.

## Masts with 6-bearings fork carriage

All components of the mast are designed for excellent visibility, high stability and a long service life:

- Slim line mast sections with lift cylinders hidden behind, give an excellent field of view for safe operation.
- Standard 6-bearings fork carriage (from 3t capacity).
- Visibility through the carriage is excellent.
- Smooth transitions through the mast damping system, particularly on full free lift masts.

## Additional equipment

Various special equipment and attachments to adjust to different application or customer requirements are optionally available.

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