

**Large capacity industrial engines with high torque and a long service life**

**Hydrostatic drive unit for fast acceleration and direction changes**

**VarioControl with 5 drive programmes**

**Oil immersed multi-disc brakes with automatic parking brake operation**

**Comfortable operator's compartment featuring exemplary ergonomics**



## **DFG 425s–430s and TFG 420s–430s**

**Diesel forklifts with hydrostatic drive (2500, 3000 kg) and  
LPG forklifts with hydrostatic drive (2000, 2500, 3000 kg)**

Jungheinrich Diesel and LPG forklift trucks with hydrostatic drive give an incredible handling capacity. Their strengths come particularly to the fore in applications that require lots of direction changes (e.g. lorry loading). These strengths include dynamic acceleration, fast direction change and precision control. VarioControl enables the truck to be adjusted to different applications.

Large capacity industrial engines generate high torque even at low speeds, giving the

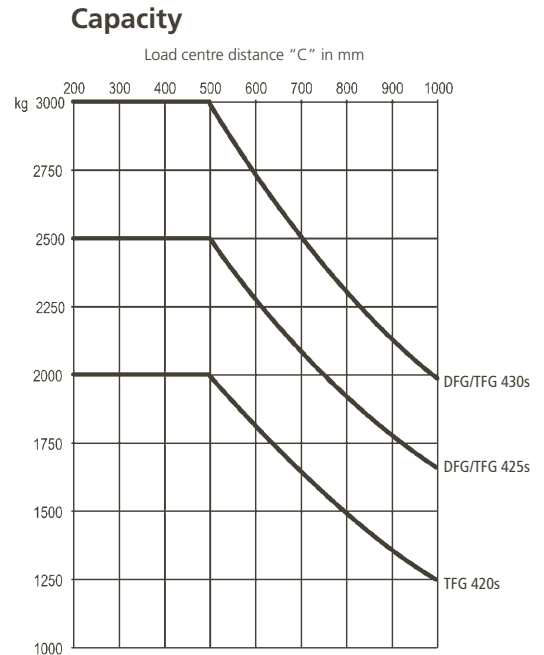
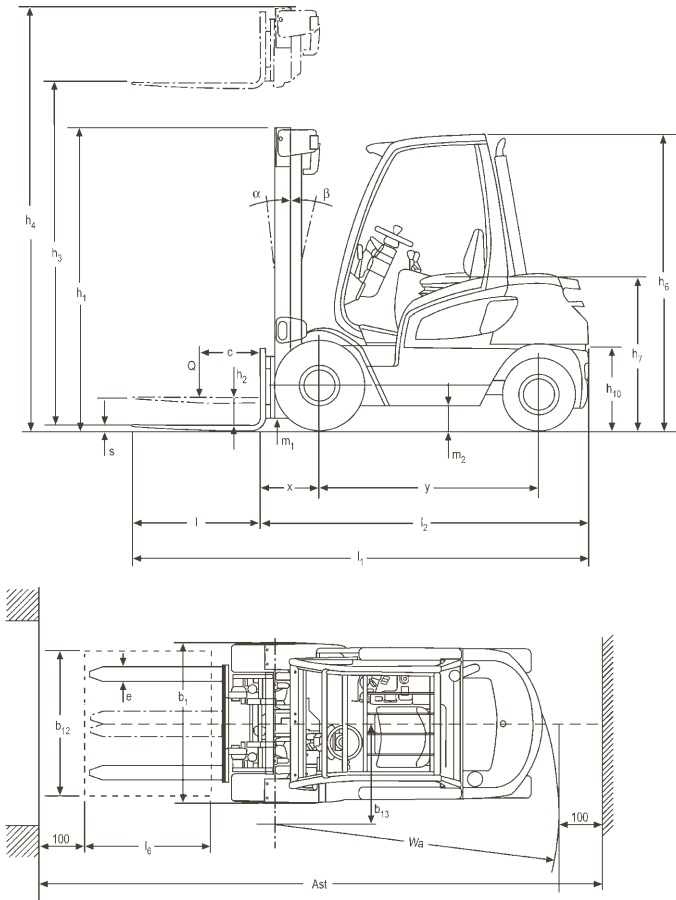
benefits of lower fuel consumption and noise. These robust engines are specially designed for use in industrial trucks, ensuring high reliability and a long service life even in tough applications.

The exhaust emission of all engines is low and already conforms to future EU regulations. A regulated 3-way catalyser for LPG trucks as well as various soot particulate filter systems for Diesel trucks are available as options.

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

**JUNGHEINRICH**

# DFG 425s–430s and TFG 420s–430s



Mast table DFG 425s–430s and TFG 420s–430s							Capacity table (kg) c = 500 mm			
Designation	Lift height $h_3$ mm	Free lift $h_2$ mm		Closed height $h_1$ mm	Extended height $h_4$ mm		Tilt forward/ backward $\alpha/\beta$ (°)	without sideshift, single tyres (SE)		
		DFG 425s/ TFG 420s–425s	DFG/TFG 430s		DFG 425s–430s/ TFG 420s–430s	DFG 425s/ TFG 420s–425s		DFG/TFG 430s	TFG 420s	DFG/TFG 425s
Two-stage mast ZT	2900	150	150	2080	3510	3670	6/10	2000	2500	3000
	3100	150	150	2180	3710	3870	6/10	2000	2500	3000
	3300	150	150	2280	3910	4070	6/10	2000	2500	3000
	3500	150	150	2380	4110	4270	6/10	2000	2500	3000
	3700	150	150	2480	4310	4470	6/10	2000	2500	3000
	4000	150	150	2630	4610	4770	6/6	2000	2500	3000
	4300	150	150	2830	4910	5070	6/6	2000	2500	3000
	4500	150	150	2930	5110	5270	6/6	2000	2500	3000
	4700	150	150	3030	5310	5470	6/6	2000	2500	3000
	5000	150	150	3180	5610	5770	6/6	2000	2500	3000
5500	150	150	3480	6110	6270	6/6	1900	2500	2800	
5800	150	150	3630	6410	6570	6/6	1850		2600	
6000	150	150	3730	6610	6770	6/6	1800		2400	
Two-stage mast ZZ	2900	1480	1380	2080	3500	3600	6/10	2000	2500	3000
	3100	1580	1480	2180	3700	3800	6/10	2000	2500	3000
	3300	1680	1580	2280	3900	4000	6/10	2000	2500	3000
	3500	1780	1680	2380	4100	4200	6/10	2000	2500	3000
	3700	1880	1780	2480	4300	4400	6/10	2000	2500	3000
	4000	2030	1930	2630	4600	4700	6/6	2000		3000
	4300	2230	2130	2830	4900	5000	6/6	2000		3000
4500	2330	2230	2930	5100	5200	6/6	2000		3000	
Three-stage mast DZ	4400	1480	1380	2080	5000	5100	6/6	2000	2500	3000
	4700	1580	1480	2180	5300	5400	6/6	2000	2500	3000
	5000	1680	1580	2280	5600	5700	6/6	2000	2500	3000
	5500	1880	1780	2480	6100	6200	6/6	1900	2100	2700
	6000	2080	1980	2680	6600	6700	6/6	1800		2350
	6500	2280	2180	2880	7100	7200	6/6		1700	
	7000	2480	2380	3080	7600	7700	6/6		1350	

# Technical data in line with VDI 2198 as at: 01/2007

Identification	1.1	Manufacturer (abbreviation)	Jungheinrich	Jungheinrich		Jungheinrich		1.1	
	1.2	Manufacturer's type designation	<b>TFG 420s</b>	<b>DFG 425s</b>	<b>TFG 425s</b>	<b>DFG 430s</b>	<b>TFG 430s</b>	1.2	
	1.3	Drive	Fuel gas	Diesel	Fuel gas	Diesel	Fuel gas	1.3	
	1.4	Operator type	seat	seat		seat		1.4	
	1.5	Load capacity/rated load	Q (t)	2	2.5		3		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)	481 <sup>1)</sup>	481 <sup>1)</sup>		486 <sup>2)</sup>		1.8
	1.9	Wheelbase	y (mm)	1685	1685		1685		1.9
	Weights	2.1	Service weight	kg	3710	4170	4140	4680	4650
2.2		Axle loading, laden front/rear	kg	5180/530	5800/870	5780/860	7000/680	6980/670	2.2
2.3		Axle loading, unladen front/rear	kg	1960/1750	1820/2350	1800/2340	2050/2630	2030/2620	2.3
Wheels, Chassis	3.1	Tyres		SE/SE	SE/SE		SE/SE		3.1
	3.2	Tyre size, front		7.00-12 (14 PR)	7.00-12 (14 PR)		27x10-12 (14 PR)		3.2
	3.3	Tyre size, rear		6.50-10 (10 PR)	6.50-10 (10 PR)		6.50-10 (10 PR)		3.3
	3.5	Wheels, number front rear (x = driven wheels)		2x/2	2x/2		2x/2		3.5
	3.6	Tread, front	b <sub>10</sub> (mm)	986	986		1045		3.6
	3.7	Tread, rear	b <sub>11</sub> (mm)	940	940		940		3.7
	Basic Dimensions	4.1	Tilt of mast/fork carriage forward/backward	$\alpha/\beta$ (°)	6/10	6/10		6/10	
4.2		Closed mast height	h <sub>1</sub> (mm)	2280	2280		2280		4.2
4.3		Free lift	h <sub>2</sub> (mm)	150	150		150		4.3
4.4		Lift	h <sub>3</sub> (mm)	3300	3300		3300		4.4
4.5		Height, mast extended	h <sub>4</sub> (mm)	3910	3910		4070		4.5
4.7		Height of overhead guard (cabin)	h <sub>6</sub> (mm)	2230	2230		2230		4.7
4.8		Seat height/stand height	h <sub>7</sub> (mm)	1095	1095		1095		4.8
4.12		Coupling height	h <sub>10</sub> (mm)	440/615	440/615		440/615		4.12
4.19		Overall length	l <sub>1</sub> (mm)	3515	3525		3640		4.19
4.20		Length to face of forks	l <sub>2</sub> (mm)	2515	2525		2640		4.20
4.21		Overall width	b <sub>1</sub> /b <sub>2</sub> (mm)	1185/-	1185/-		1321/-		4.21
4.22		Fork dimensions	s/e/l (mm)	40x100x1150	40x120x1150		45x125x1150		4.22
4.23		Fork carriage ISO 2328, class/type A, B		2A	2A		3A		4.23
4.24		Fork-carriage width	b <sub>3</sub> (mm)	1120	1120		1120		4.24
4.31		Ground clearance, laden, below mast	m <sub>1</sub> (mm)	95	95		100		4.31
4.32		Ground clearance, centre of wheelbase	m <sub>2</sub> (mm)	132	132		142		4.32
4.33	Aisle width for pallets 1000x1200 crossways	Ast (mm)	3925	3935		4050		4.33	
4.34	Aisle width for pallets 800x1200 lengthways	Ast (mm)	4125	4135		4250		4.34	
4.35	Turning radius	Wa (mm)	2265	2275		2360		4.35	
4.36	Internal turning radius	b <sub>13</sub> (mm)	785	785		785		4.36	
Performance Data	5.1	Travel speed, laden/unladen	km/h	19.5/19.8	19.3/19.6		19.8/20.1	20.0/20.3	5.1
	5.2	Lift speed, laden/unladen	m/s	0.53/0.56	0.53/0.55		0.52/0.55		5.2
	5.3	Lowering speed, laden/unladen	m/s	0.55/0.52	0.55/0.52		0.55/0.52		5.3
	5.5	Drawbar pull, laden/unladen	N	18600/10500	21000/11000	19500/10800	19000/11500	19000/11700	5.5
	5.7	Gradeability, laden/unladen	%	28/29	27/25	27/26	25/25	24/26	5.7
	5.9	Acceleration time, laden/unladen	s	4.9/4.7	5.1/4.7	5.1/4.75	5.2/4.8	5.3/4.9	5.9
5.10	Service brake		hydrostatic	hydrostatic		hydrostatic		5.10	
Combustion engine	7.1	Engine manufacturer/type		GM 3.0LL4	Perkins 404C-22T	GM 3.0LL4	Perkins 404C-22T	GM 3.0LL4	7.1
	7.2	Engine power acc. to ISO 1585	kW	44	43	44	43	44	7.2
	7.3	Rated speed	min <sup>-1</sup>	2200	2600	2200	2600	2200	7.3
	7.4	No. of cylinders/displacement	/cm <sup>3</sup>	4/2966	4/2216	4/2966	4/2216	4/2966	7.4
	7.5	Fuel consumption acc. to VDI cycle	l/h, kg/h	3.0 <sup>3)</sup>	4.2 <sup>4)</sup>	3.1 <sup>3)</sup>	4.2 <sup>4)</sup>	3.26 <sup>3)</sup>	7.5
Others	8.1	Type of drive control		hydrostatic	hydrostatic		hydrostatic		8.1
	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 the driver's ear according to DIN 12 053	dB(A)	76	76		76		8.4
	8.5	Towing coupling, type DIN		15170/type H	15170/type H		15170/type H		8.5
1) 506 mm for DZ mast; with integrated SS: x = 493 mm (518 mm for DZ mast); with attachment SS: x = 539.5 mm (564.5 mm for DZ mast) 2) 511 mm for DZ mast; with integrated SS: x = 500 mm (525 mm for DZ mast); with attachment SS: x = 558 mm (583 mm for DZ mast) 3) 45 VDI working cycles/h 4) 60 VDI working 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 compartment

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

- Large visible step provides easy safe entrance and exit from the operators compartment.
- Anti-vibration mountings noticeably reduce vibrations and oscillations.
- Deluxe seat can be adjusted in three ways. Air suspension is available as an option.
- Infinitely adjustable steering column.
- Large, comfortable foot well with automotive style pedal layout.
- 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 has extensive warning and control lights.
- Comfortable working environment in all weathers due to cabs (optional) in various designs.

## Engines

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

- 2.2 litre Diesel engine (Perkins), developing 43 kW of power with a maximum torque of 190 Nm at 1800 rpm. Clean emissions and quiet running through indirect injection.
- 3.0 litre LPG engine (Otto), developing 44 kW of power with a maximum torque of 185 Nm at 1600 rpm.
- Long service life due to robust construction and low engine speed.
- 500 hour servicing interval.
- Standard catalytic converter (TFG) for low emissions (CO, HC). Closedloop 3-way catalytic converter is available as an option (NOx, CO, HC).
- Low soot emission (Diesel). Various types of soot filter systems (optional).
- 58 litre diesel tank integrated in the chassis.

## Hydrostatic drive and control system

The hydrostatic drive system is electronically controlled enabling precise control of drive and hydraulic lift function.

- High productivity in rapid direction change applications.
- VarioControl featuring 5 drive programmes; the performance can be adjusted individually.
- Automatic engine speed increase when using the lift lever.
- Single pedal control (accelerator) of travel speed and stopping.
- Optional twin pedal control.
- Low servicing costs due to the hydrostatic drive unit having no wearing parts (clutch, differential, gearbox, brakes).

## Electrics

Diesel truck has 12 Volt, 72 Ah battery with a 85 Amp alternator. LPG truck has 12 Volt, 40 Ah battery with a 66 Amp alternator. LPG engine also benefits from maintenance-free, non-contact electronic ignition.

## Tyres

Superelastic tyres as standard. Pneumatic tyres or Non-marking SE tyres available as options.

### DFG 2.5 t TFG 2t/2.5t

Front axle					
Tyre type	Units	Size	PR	Track width	Truck width
Pneumatic	2	27x10-12	16	1045	1321
SE	2	7.00-12	—	986	1185
SE twin	4	7.00-12	—	1332	1645

Rear axle					
Tyre type	Units	Size	PR	Track width	Truck width
SE	2	6.50-10	—	940	
Pneumatic	2	6.50-10	10	940	

### DFG/TFG 3 t

Front axle					
Tyre type	Units	Size	PR	Track width	Truck width
Pneumatic	2	27x10-12	16	1045	1321
SE	2	27x10-12	—	1045	1321
SE twin	4	7.00-12	—	1332	1645

Rear axle					
Tyre type	Units	Size	PR	Track width	Truck width
SE	2	6.50-10	10	940	
Pneumatic	2	6.50-10	10	940	

## Steering

Hydrostatic steering provides low effort shock free steering, for maximum operator comfort and safety. The steer axle with integrated steering cylinder is fixed to the chassis through rubber bushes.

## Brake

The hydrostatic truck abandons the need for a conventional brake. Only in emergencies should the brake pedal be depressed:

- Complete wear-free hydrostatic braking.
- Hydrostatic braking eliminates the need to use the brake pedal, accelerator pedal controls acceleration and braking.
- In addition the spring actuated oil immersed multi-disc brake requires no maintenance.
- Safety on ramps- handbrake engages automatically when truck comes to a halt or when the engine is switched off.

## Hydraulic system

The high performance filter system ensures clean oil and therefore the long service life of all the components:

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

## Mast

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

- Slim line mast sections with lift cylinders hidden behind, give an excellent field of view for safe operation.
- Visibility through the carriage is excellent.
- Carriages comply with FEM/ISO-2328.

## Options

Various special options and attachments are available for adapting to a range of application requirements or customer requests.

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