

Tanks and slurry technology

We are Fliegl.

Flieg

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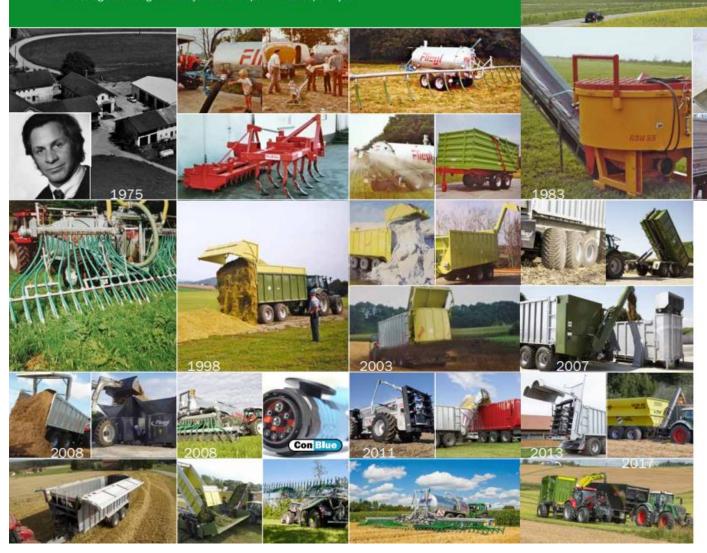
Dimensions, weights, and technical data are subject to change.

Some illustrations show special equipment.

Siurry technology 11/2017

Innovative by tradition

The name Fliegl has a decades-long reputation for quality, innovative action and practical solutions for agriculture. These are advantages which have made Fliegl, for example, the No.1 in Europe for agricultural trailers. Whether it's about a tipper, an original push-off trailer, slurry technology or harvest logistics: Fliegl will always have the optimum concept for you.





Innovative, top-quality products

Just because an idea is new, it doesn't necessarily mean that it's a good one. At Fliegl, we rigorously check every single product. We know the demands of the market and we are in constant contact with the practitioners. Our engineers and designers use the very latest CAD systems to develop products that are consistent down to the last detail and provide clear practical benefits. Innovations from Fliegl Agrartechnik are always concrete solutions for real

German quality in action worldwide

Despite globalisation, Fliegl has consistently developed and produced in Germany, and one reason for this is our trained and qualified staff. From engineers to apprentices, we look for skills that we can develop through continuous education and training. Another factor is the high technical standard in Germany, which provides the ideal conditions for developing our ideas into the high-quality products expected of the Fliegl brand.







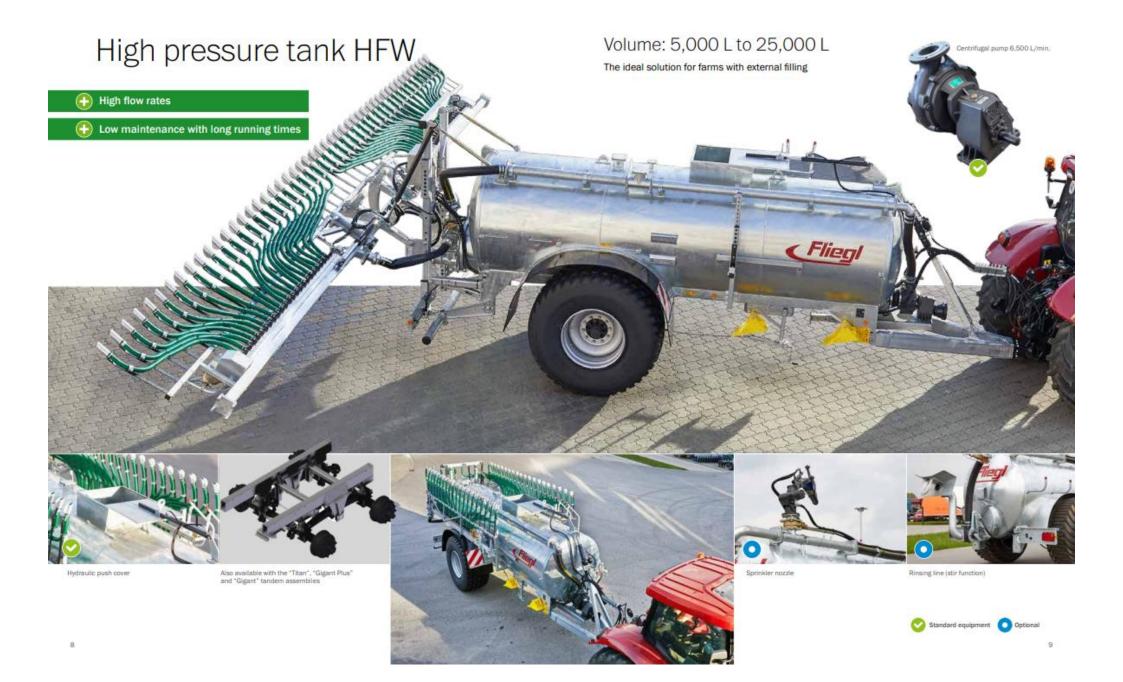






Perfect technology for high power suction and spreading

Standard equipment Optional





Standard equipment O Optional







Two-axie transport tanker TFW 16.000



Tanker trailer STF 25,000 I and 27,500I

- Volume 25,000 For 27,500 F
- . Two-axle or three-axle version
- · Air suspension
- . Steering axle with automatic locking
- 40 60 or 80 km/h version
- Vacuum or pump version
- Filling dome D600 mm
- · Rear docking
- · Suction nozzle 8"
- · Internal agitator pneumatic or hydraulic
- Electromagnetic control

The various SERIES - with a big equipment plus!

A tank to suit any requirement



JUMBO Line

Jumbo Line tanks are specially designed for farms where there are steep slopes. These tanks are distinguished by their particularly low centre of gravity, from 5,000L with offset axle as standard!

JUMBO Turbo Line

Jumbo Turbo Line tanks differ from the Jumbo Line tanks in that they have an additional centrifugal pump. Thanks to the combination of compressor and centrifugal pump, a hydraulically swivelling sprinkler nozzle can be mounted as an option. So even slurry can be spread even on steep slopes that are difficult to negotiate.

MAXX Line

Maxx Line tanks have customised equipment and they are distinguished by their robust design.

Suitable equipment variants can be selected for the widest range of applications and regions.

MAXX Line PLUS

MAXX Line Plus tanks are impressive with their high power and extensive basic equipment. With their standard 750/60-R30.5 tyres, these tanks are gentle on the land. Practicality and efficiency were of particular importance to us when developing this tank line!

ALPHA Line

Alpha Line tankers not only provide special operating and ride comfort, they are also especially distinguished by their extensive basic equipment which uses the very latest technology. These tanks were designed for professional and intensive applications and can be fitted with the widest variety of additional options!

VACUUM VACUUM

PUMP & VACUUM

PUMP & VACUUM

PAMP.

Fliegl Line

Vacuum tank Jumbo Line

Volume: 3,000 L to 8,600 L



With offset axle starting from 5000 L: Low centre of gravity en-

sures optimal handling on slopes

READY FOR ANY CHALLENGE!

Ideal for farms where there are very steep slopes

STANDARD starting from 50001

Mounting bracket for drag hose or drag shoe spreader Downhill emptying (with internal pipe)



Silencer with oil separator

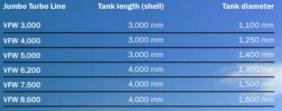
Suction nozzle 6" with docking station

Blind rear flange and pre-fitted for

downhill emptying



Volume: 3,000 L to 8,600 L





- Suction nozzle 6" with docking system
- Turbo filler with 6" suction nozzle and docking system
- Pneumatic internal agitator
- Compressor and centrifugal pump with hydraulic changeover
- Ladder

- Top or bottom hitch
- · Various brake systems
- · Various drawbar eyes
- · Different speed versions
- Different tyre variants



Compressor and centrifugal pump combination

Compressor 5000 L with centrifugal pump 3500 L up to 4000L tank

Compressor 8000 L with centrifugal pump 6500 L starting from 5000L tank



hydraulic up/down adjustment



Mounting bracket for drag hose or drag shoe spreader STANDARD starting from 5000L

Downhill emptying

Turbo filler

With offset axle starting from 5000 L: Low centre of gravity ensures optimal handling on slopes





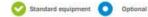


Hydraulic sprinkler nozzle

Ideal for very steep slopes with its sprinkler nozzle



Versatile and robust





VFW/PFW 25,000

7,500 mm

1,900 mm

Vacuum or pump tank "MAXX Line Plus"



Vacuum/pump tank MAXX Line Plus	Tank length (shell)	Tank diameter	
VFW/PFW 14,000	6,000 mm	1,700 mm	
VFW/PFW 16,000	6,000 mm	1,800 mm	
VFW/PFW 18,000	6,000 mm	1,900 mm	

Volume: 14,000 L to 18,000 L OPTIONAL FOR PFW/VFW Available with 23 t or 24 t permitted total weight Discharge accelerator with shredding cutter "MAXX Line Plus" pump tank Standard equipment Optional



"Gigant Plus" axle assembly for MAXX Line Plus 16,000 L and 18,000 L

Wheel arch and tyres Tyres 750/60-R30.5" Optional: Rear tyres 750/60-R30.5" Front tyres 850/50-R30.5



Steering axie
A BPW axie in the 410 x 180 mm brake drum version is mounted as standard for all MAXX Line Plus tanks



Top-class equipment - for high impact

22 23







Optimal adaptation of drawbar load by mechanical axle shift (standard equipment) or hydraulic stepless adjustment (optional). Also for attaching slurry spreaders, such as a drag shoe spreader



Axles are displaced backward for field application High drawbar load = more traction

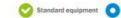


Axles are displaced forward for road application Less drawbar load = greater ride comfort



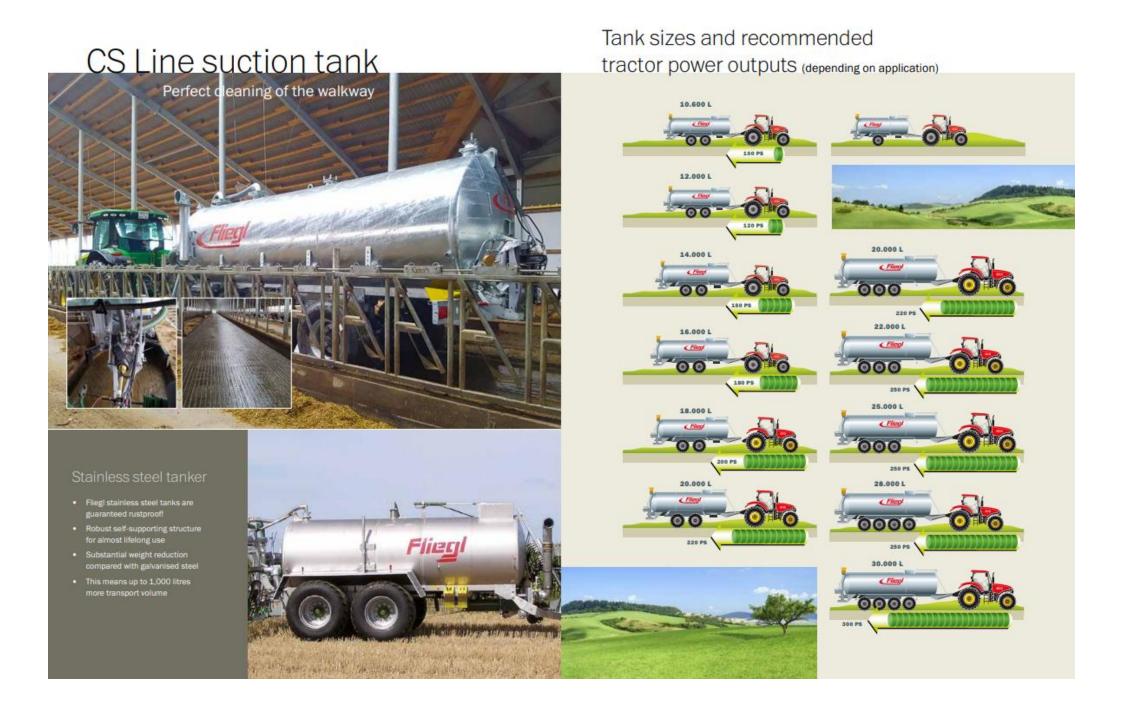
Telescopic axle (only possible with Boogle SB floating assembly)

Drawbar suspension





Alpha Line	Axles	Tank length (shell)	Tank Ø	
VFW/PFW 10,600	1	5,000 mm	1,600 mm	
VFW/PFW 12,000	1	5,000 mm	1,700 mm	
VFW/PFW 14,000	1	5,000 mm	1,900 mm	
VFW/PFW 14,000	2	6,000 mm	1,700 mm	
VFW/PFW 16,000	2	6,500 mm	1,800 mm	
VFW/PFW 18,000	2	6,500 mm	1,900 mm	
VFW/PFW 20,000	2	7,000 mm	1,900 mm	
VFW/PFW 23,000	3	7,450 mm	2,000 mm	
VFW/PFW 25,000	3	7,450 mm	2,100 mm	
VFW/PFW 28,000	3	7,450 mm	2,150 mm	



Accessories

With Fliegl accessories, your tanker becomes an effective 'response vehicle' with which you have all factors under control.



Digital flow meter Control panel for tank control without Skate distributor, up to 6 sections



Control panel for Skate distributor and tank



. More comfortable coupling and uncoupling

- · Tank can be completely emptied
- · Perfect suspension on the road



Tyre pressure control system for soil-sparing field applications with one/two wire system



Piston compressor with up to 3 m² air flow rate



Foam separator



Load sensing or constant flow control block



Hydraulic filling dome
Available sizes: Ø 400 mm and Ø 600 mm
Opens to right or left depending on mounting



Fixed ladder



Hydraulic bell gate for vacuum tank, robust and impervious to residual matter (ideal for litter manure)



Digital tank meter



Internal pneumatic agitator, possible only in con-Plexiglas fill level indicator nection with compressor. Slurry is homogenised



Fill level indicator with float ball



Robust drop support leg



Hydraulic support leg



Three or four point hydraulics

Filling technology



Turbo filler with quick coupler (6" or 8")



Pump tank suction nozzle 8"



Turbo filler at centre under tank Suction process possible on right or left



nally with 8" turbo filler)



Lateral suction boom 4500mm length



Elefant suction nozzle 8" Possible on left or right.

Length 5000 mm with four-way control block.

Turbo filler with telescopic extension 1500 optional.



Slurry couplings

All Fliegl tanks are fitted with the "Italian System" as standard.

THE "ITALIAN" SYSTEM







This system has a lever-worked to the Mi-place. On the V-place is a half with a loose clamping ring.
This ring must have a sharp edge where the lover of the Mi-place engages. If this edge has been machined to make it round, it is called the "Bazzot Siegperio" system.

To determine the size of the Italian coupling, measure either the outside diameter of the V-piece or the inside diameter of the M-piece.

The outside diameter of the V-piece or the inside diameter of the M-piece must be the same for the M-piece and the V-piece. The coupling hose connector is measured by the outside or inside hose diameter.

Sizes of the Italian system

M-piece (with 0-ring)
inside dim. A 131 mm = 4*
inside dim. A 151 mm = 5"
inside diet. A 181 mm - 6"
inside dim. A 245 mm = 8°
inside dim. A 301 mm - 10"
inside dim. A 371 mm = 12"

I-piece (with lease clamping ring)	Hose sizes
utside dim. B 130 mm / inside dim. A 100 mm = 4*	4" + 100 mm
rutside dim. B 150 mm / inside dim. A 120 mm = 5*	5" + 120 mm
outside dim. B 180 mm / inside dim. A 150 mm = 6"	6" + 150 mm
outside dim. B 240 mm / inside dim. A 205 mm = 8*	8" - 200 mm
utside dim. B 300 mm / inside dim. A 254 mm = 10°	10" - 250 mm
ustaide dim. B 370 mm / inside dim. A 304 mm = 12°	12° = 300 mg



Quick coupler 6"



THE "PERROT" SYSTEM





This system has a movable ring on the M-piece to which the levers are attached. The V-piece has a tapered section

and is made of one part only. To determine the size of the Periot coupling, measure either the outside diameter of the V-piece or the inside diameter of the M-piece. The coupling hase connector is measured by the outside or inside hose diameter.

Sizes of the Perrot system

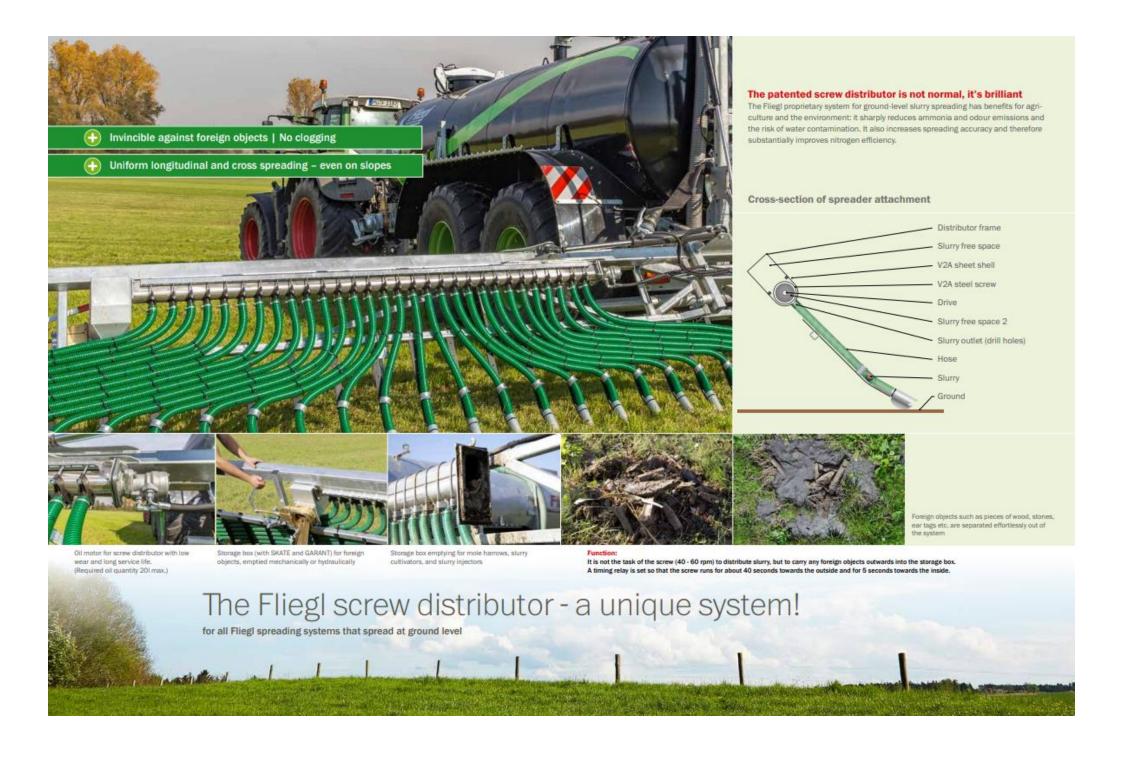
-prece (with 0-mig)	Perret V-grece			
side dim. A 150.0 mm - 4*	outside dim. B 155 mm / inside dim. A 108 mm = 41			
side dim. A 171.5 mm = 5*	outside dim. B 179 mm / inside dim. A 133 mm = 5"			
side dim. A 203.5 mm + 6*	outside dim. 8 211 mm / inside dim. A 159 mm = 6"			
the same a major of the same o	The state of the s			

Hose sizes 4" = 108 mm 5" = 133 mm 6" = 159 mm





Perrot quick coupler 6"





Fliegl pump tank PFW 18,000 with SKATE 150

Working widths 9 - 21 m

- Solid design but nevertheless low net weight through special frame and distributor construction
- No loss of drawbar load as the drag shoe spreader rests on the ground
- High coulter pressure of 8 kg per injector shoe
- Individual height adjustment of drag shoe spreader possible
- With automatic slope compensation as standard
- Specially tilted swivel joints ensure an extremely slim transport position and therefore good all round vision
- Very narrow transport width of about 2,300mm at the top
- Automatic drip stop as the distributor is swivelled up by comfort control
- Outstanding slurry distribution, low maintenance and low oil requirement (max. 20l) thanks to the Fliegl screw distributor
- No kinks on the outlet hoses when folding in/out, thanks to the special folding mechanism
- Sprung injector shoes for optimal ground adaptation
- Mechanical or hydraulic boom section control possible
- . Mechanical shut-off of individual hose outlets possible
- Simple mounting directly on the tank possible
- Comfort control with automatic folding and headland function as standard
- Controlled by a tractor control unit (pressureless return required) or by Load Sensing
- Control through Isobus possible
- Narrow hose spacing of 250mm, therefore optimal for grassland and arable land





Construction and control



Control through ISOBUS













"EASY" comfort control (standard equipment)

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O.O.

- Relieves the driver and prevents operator errors
- The ergonomic control panel is backlit and can be easily disconnected from the cable by the connector, so it can be left in the tractor
- Folding of the distributor arms is monitored by sensors at all positions, so the folding is synchronised and dampened even on slopes.



The distributor...

- . Is lifted out of the mechanical transport lock
- · folds the distributor arms backwards
- · is lowered into working position

AUTOMATIC SPREADING

- · Gate slider opens
- · Spreading augers start working

AUTOMATIC HEADLAND FUNCTION

- . Spreading augers switch off
- Gate slider closes
- · Distributor folds up



ISOBUS adapter cable allows quick changeovers

Using the ISOBUS adapter, the SKATE can be operated either with the standard EASY comfort control or through an ISOBUS terminal. So it is easy to change between older and newer tractors.

EASY comfort control panel

SKATE Angle sensors on left and right for even folding on slopes Compact transport width of 2600mm at Extremely low overall height bottom and 2300mm at top Storage box opens mechanically or Specially tilted swivel joints Control block hydraulically Special folding mechanism prevents any kinking of the outlet hoses Automatic slope compensation for optimal ground adaptation Uniform spread quality with short outlet hoses Hose distance 250mm Coulter pressure 8kg Integrated overpressure protection

Accessories...

Boom section control mechanical or hydraulic





Shredding cutter integrated in the Flieg) screw distributor (oil capacity 60l required)





Mechanical shut-off of individual hoses



Hydraulic emptying of storage box

T-piece with manual mechanical slider for an additional output, e.g. for an impact head spreader

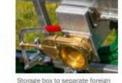
SKATE

...easy retrofit even for tanks from other manufacturers





"Garant" drag shoe distributor











Screw conveyor control unit

Pressure sequence valve

Working width 9 - 18 m

- . Slurry is deposited in strips directly on the soil surface
- With the proven Fliegl screw distributor
- · Foreign objects are carried automatically into the
- . Layout and structure of the frame and distributor arms as on the Fliegl SKATE
- . Controlled by two tractor control units (1x for folding mechanism 1x for screw distributor)
- · Without control panel
- · Required oil capacity 20I max.
- · Lowest power requirement

"Vario-Disc" slurry injector

Patented system for perfect incorporation in grassland and arable land







Stepless disc adjustment

Jagged edge discs for better injection quality

Working widths 3.00 m, 6.00 m and 8.00 m

- Grassland and arable land application
- Can be mounted on almost any slurry tank

 Adjustable support wheels
- With the proven Fliegl screw distributor
- Frame fully galvanised
- Maintenance-friendly
- · Hydraulic folding
- Sturdy angular contact roller bearings
- Disc diameter 530 mm



Targeted depositing of the slurry under the turf

"Mole" compact disc harrow

Easy-pull soil cultivation and targeted incorporation of slurry in one operation



Working widths 3.00 m, 6.00 m and 7.60mm

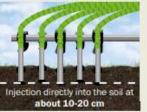
- · With the proven Fliegl screw distributor
- . With the large-sized coulter discs, the subsoil is worked over and the slurry incorporated in a single operation
- · Hydraulic folding
- · Large adjustable support wheels
- Sturdy angular contact roller bearings
- Disc diameter: 510 mm

"GUG" slurry cultivator

Powerful soil cultivation and targeted incorporation of slurry in a single operation







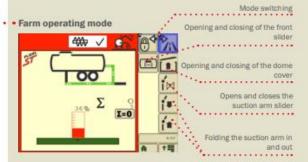
Working widths 3.00 m, 4.50 m and 6.00 m

- For uncultivated stubble fields
- . Robust cultivator tines for the toughest jobs
- Replaceable double-heart points
- . Can be mounted on almost any slurry tank . Easy to operate
- With the proven Fliegl screw distributor
 Height-adjustable support wheels
- · Frame fully galvanised

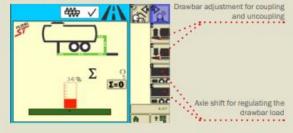
- · Hydraulic folding (for working widths 4.50 m and 6.00 m)
- Maintenance-friendly



It has three different modes: road, farm and field operation. The reason for this is that only certain functions are available in each mode. For example in farm mode, which is intended for filling operations, the three-way gate slider at the rear cannot be operated. This prevents any undesired operator errors. Field mode may have one or more pages, depending on the number of functions the tank has.



Road operating mode



Bring the three-way silder into

spreading position. Pump is

Fliegl Slurry Tanker (FST) is a control system which allows all of the functions of a slurry tanker to be controlled comfortably through an ISOBUS display

Advantages

- · Makes slurry spreading easier
- Increases operator comfort and safety when applying fertilisers.
- . The control system uses the existing ISOBUS display and makes it unnecessary to have an additional control panel in the tractor.
- · Compatible with any ISOBUS display (has the AEF certificate).
- . Since the FST only needs three hoses between tractor and tank, coupling and uncoupling is totally uncomplicated.
- Load-sensing-enabled as standard, i.e. hydraulic functions are always supplied only with the quantity of oil actually required; this not only reduces heating of the oil, but also fuel consumption.

· Field operating mode

switched on automatically. Opening and closing the front slider Folding the distributor in and out: the transport lock is opened and closed automat-Drag hoses folding out and in



Fliegl Flow Control

FFC without variable speed pump

On the version without variable speed pump, you can easily set the spreading rate in m3/ha. The optimal speed to obtain the desired spreading rate is calculated and displayed. This version is therefore suitable mainly for flatland areas.

FFC with bypass system (for pump tank only)

If the engine is operating at full capacity and the recommended speed can no longer be obtained when going uphill, the PTO speed must be reduced to avoid excess fertiliser application. With the new bypass system from Fliegl, manure is simply re-directed from the feed line back into the tank. This means there is less manure at the dribble bar and excess application is avoided. The bypass is controlled automatically by the system as required.

FFC with controlled discharge acceleration (for vacuum tank only)

With this system the tank is emptied by a discharge accelerator. This is operated by a separate oil motor independently of PTO speed. As well as setting the spreading rate in m3/ ha, you can also adjust the spreading rate in m3/min. If the diesel engine is running at full capacity when going uphill, then the calculated optimal travel speed can no longer be obtained. So you can reduce the flow rate per minute and the optimal travel speed for this flow rate is recalculated. In this way you can also obtain an even spread pattern when going uphill.

Control by travel speed

Automatic speed control according to flow rate and selected spreading rate by Isobus Class 3 functionality (only possible with certain tractor manufacturers).

15.0 m·/ha

3/% 25.9 a'/ha

13)10.5 km/h

€ 14 6.0 km/h ♦ 1.6 m·/min (3.1 m'/min

Ou/min - Obaz 0x

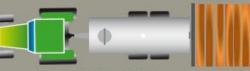
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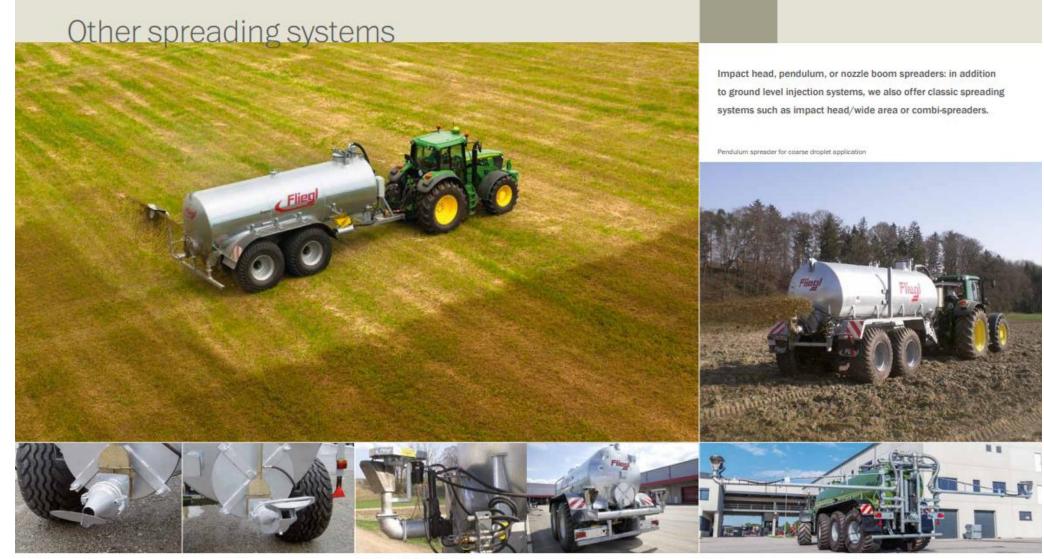
1 Enter the desired spreading rate

↑■

Uniform spreading result with Fliegl Flow Control







Wide area spreader

Combi-spreader - folding Follow the national regulations on the use of fertilisers

Hydraulic pendulum spreader with working width from 12 to 18 m.

Hydraulic double pendulum spreader

Nozzie boom spreader with maximum working width 21 - 30 m



Hydraulic forced steering





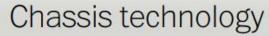
Steered

Straight-ahead travel

Optional: BPW axi

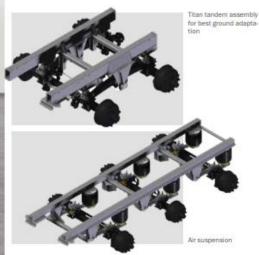
BPW steering aske with undulated thrust bearings. These hold the wheel in the straight position for straight-ahead travel and, when turning, the lateral forces on the tyre push the thrust washers one over the other. When the turning manoeuvre is complete, the vehicle weight automatically brings these back to the straight-ahead position.





For secure handling, even in extreme driving situations!







Optimal adaptation of drawbar load by mechanical sale shift (standard equipment) or hydraulic stepless adjustment (optional). Also for attaching slurry spreaders, such as a drag shoe spreader



Axles are displaced backward for field application
High drawbar load = more traction by

the tractor



Axies are displaced forward for road application Less drawbar load = greater ride comfort and less wear



TitanPlus

Sa Sa

Hydraulic axle suspension





Boogi floating assembly, rigid

54

Fliegl tank and load counter

"Beacon Counter HD"



















Beacons are paradoxical: They are small, simple and cost-effective, but at the same time they are rather brilliant. The inconspicuous-looking transmitters are based on simple Bluetooth technology and, when used intelligently, open up whole new possibilities urement point. If the tank is being for data acquisition. Fliegl set up its new tank counter as a beacon which can count and store in memory - tank metering has never before been so simple, accurate,

wireless and maintenance-free. At the heart of the Fliegl tank counter is a beacon which is mounted at the pivot point of a float in the slurry tank. If the tank is being filled, the beacon registers the filling at an upper measemptied, the beacon registers the emptying at a lower measurement. point. One filling and one emptying is counted as one tank load.

Apps "for BEACON Counter HD"

The beacon monitoring app - the beacon extends the already numerous possible applications of a smartphone. With this app you can read off all the data stored by the beacon.





