DLG Test Report 7434

**APOLLO TYRES (Europe) B.V. / VREDESTEIN TYRES**

## VF tyres for agricultural trailers

# Vredestein Flotation Optimall VF 750/60R30.5

Resources protection through
soil preservation and fuel saving


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## Overview


A test mark “DLG APPROVED for individual criteria” is awarded for agricultural products which have successfully fulfilled a scope-reduced usability testing conducted by DLG according to independent and recognized evaluation criteria. The test is intended to highlight particular innovations and key criteria of the test object. The test may contain criteria from the DLG test scope for overall tests, or focus on other value-determining characteristics and properties of the test object.

The minimum requirements, test conditions and procedures as well as the evaluation bases of the test results will be specified in consultation with an expert group of DLG. They correspond with the recognised rules of technology, as well as scientific and agricultural knowledge and requirements. The successful testing is concluded with the publication of a test report, as well as the awarding of the test mark, which is valid for five years from the date of awarding.

The present test was conducted with the Vredestein Flotation Optimall VF 750/60R30.5 187D agricultural trailer tyre. The DLG test module “Resources Protection” was tested.

Agricultural tyres are an important component of agricultural machinery and vehicles. They have to cope with different surfaces and loads, withstand different speeds, and all that while maintaining consistent performance and a long service life. The requirements for agricultural tyres are varied and demanding. There are many different types of agricultural tyres suitable for different applications. The variety of application areas is large and ranges from soil cultivation to harvesting to transporting goods.

The DLG test module “Resources Protection” includes measurements on the effects of tyres on the soil and on fuel consumption under practical conditions. For this purpose, the corresponding generated wheel contact areas and track depths were measured with different tyre inflation pressures at constant loading and driving speed, as well as the generated soil pressures at 10 cm, 20 cm and 40 cm soil depth when driving over and the resulting penetration resistances after driving over. In addition, fuel consumption is determined during the measurement runs.

Other criteria were not tested.

## The product

### Manufacturer and applicant

APOLLO TYRES (Europe) B.V. /
VREDESTEIN TYRES
P.O. Box 27, 7500 AA Enschede
The Netherlands

Product:
Vredestein Flotation Optimall
VF 750/60R30.5 187D

### Description and technical data

- Tubeless radial tyre
- Tyre width 765 mm,
  overall diameter 1,680 mm
- Nominal tyre pressure 320 kPa
- Recommended rim: AG 24.00

*Figure 2:*
*Vredestein Flotation Optimall VF*

*Table 1:*
*Tyre pressure table Vredestein Flotation Optimall VF 750/60R30.5*

| | Tyre pressure [bar] | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0.8 | 1.2 | 1.6 | 2.0 | 2.4 | 2.8 | 3.2 |
| **Driving speed [km/hr]** | **Tyre load [kg]** | | | | | | |
| 10 | 6,315 | 8,120 | 9,830 | 11,015 | 12,710 | 14,405 | 15,990 |
| 25 | 5,620 | 7,225 | 8,750 | 9,805 | 11,315 | 12,825 | 14,235 |
| 30 | 5,430 | 6,980 | 8,455 | 9,470 | 10,925 | 12,385 | 13,750 |
| 40 | 4,965 | 6,385 | 7,735 | 8,665 | 9,995 | 11,330 | 12,580 |
| 50 | 4,505 | 5,790 | 7,015 | 7,860 | 9,065 | 10,275 | 11,410 |
| 65 | 3,850 | 4,950 | 5,995 | 6,715 | 7,750 | 8,785 | 9,750 |
| 70 | 3,505 | 4,505 | 5,455 | 6,110 | 7,050 | 7,995 | 8,875 |

## Assessment in brief

The agricultural trailer tyre Vredestein Flotation Optimall VF 750/60R30.5 187D was able to convince in the DLG test with the specified test criteria. Based on the results achieved, the Vredestein Flotation Optimall VF 750/60R30.5 187D agricultural trailer tyre is awarded with the DLG-APPROVED quality mark for the test module “Resources Protection”.

Within the group of VF tyres tested, the Vredestein Flotation Optimall VF 750/60R30.5 187D measured the largest wheel contact areas at each of the three set inflation pressures. At the lowest inflation pressure, the wheel contact area of the Vredestein Flotation Optimall VF 750/60R30.5 187D was 16 % larger compared to the standard tyre and 8 % to 14 % larger compared to the other VF tyres.

The contact surface pressure can be reduced from 1.35 kg/cm² to 0.92 kg/cm² (-32 %) by reducing the tyre pressure by 2.2 bar with the Vredestein Flotation Optimall VF 750/60R30.5 187D. This has a significant impact on soil protection, because a lower contact surface pressure means a smaller track depth and also a lower soil pressure in the deep soil layers.

The pressure measured under the the track in the soil decreases with a higher depth, when driving over. The larger the wheel contact area, the lower the measured pressure at depth. The exerted ground pressure is higher for the standard tyre than for the VF tyres in all test variants. Within the VF premium range, there is little difference in soil pressure between the tyres tested at 20 cm soil depth with the higher inflation pressures. When the tyre pressure is low, the Vredestein Flotation Optimall VF 750/60R30.5 187D produces a ground pressure that is 15 % to 20 % lower than the other VF tyres tested at a ground depth of 20 cm. At a ground depth of 40 cm, the Vredestein Flotation Optimall VF 750/60R30.5 187D has the lowest value of 0.12 bar ground pressure at 1.0 bar inflation pressure, both in the premium VF tyre range and across all tyre variants used in the test. In the test carried out, the ground pressure generated was 50 % lower compared to the budget VF tyres (0.12 bar vs. 0.24 bar) and 25 % and 30 % lower compared to the VF tyres from the premium segment (0 .12 bar vs. 0.16 bar or 0.18 bar).

The correlation between the contact area, the contact area pressure and the resulting ground pressure becomes visible through the generated track depth. As the track depth increases, so does the risk of compaction and the need for more intensive tillage to loosen and level the tracks. The Vredestein Flotation Optimall VF 750/60R30.5 187D produced the lowest track depths in all three inflation pressures in the test conducted. On average across all inflation pressure variants, its track depth was 24 % lower than that of the runner-up of the VF competitors.

Depending on the design and construction, the different tyres behave differently in the track and dissipate the force in different directions into the ground. Such design-related differences are shown in the test by different penetration resistances in the shoulder or in the center of the tyre track. Increasing penetration resistance is measured in the shoulder of the tyre track as the tyre’s inflation pressure decreases. Compared to the other tested tyres, the Vredestein Flotation Optimall VF 750/60R30.5 187D is in the lower to medium range. In the center of the tyre track, the Vredestein Flotation Optimall VF 750/60R30.5 187D tends to have higher values, but these are still well below the measured penetration resistances of VF Premium reference tyres B.

The measured fuel consumptions are subject to a strong scattering,

*Table 1:*
*Overview of results*

| DLG QUALITY PROFILE | Evaluation* |
|---|---|
| **Soil preservation** | |
| Wheel contact area | ■■■■■ |
| Ground pressure | ■■■■■ |
| Track depth | ■■■■■ |
| Penetration resistance in the soil | ■■■□□ |
| **Fuel saving** | |
| | ■■■■□ |

* The DLG test framework provides the following options in its evaluation schemes: ■■■ or better = meets, exceeds or clearly exceeds the specified DLG standard, ■■ = meets the legal requirements for marketability, ■ = failed

so that some of the obtained results can only be evaluated as tendencies. In the test conducted, the Vredestein Flotation Optimall VF 750/60R30.5 187D had the lowest fuel consumption in the 1.7 bar inflation pressure variant when compared with the other VF tyres.

The fuel consumption determined for the Vredestein Flotation Optimall VF 750/60R30.5 187D in this tyre pressure variant was 14.9 l/hr and around 1 l/h (VF reference tyre B-Premium) to 3 l/h (VF reference tyre C-Budget) lower than for the other VF tyres tested.

## The method

The aim of testing agricultural trailer tyres in the DLG Testing Module “Resources Protection” is to examine agricultural trailer tyres in terms of their effect on the soil and fuel consumption during field use.

For this purpose, the tyres to be tested are mounted on suitable vehicles and driven in field tests under practical operating conditions. For the test drives, a driving speed that is customary in practice during simulated field work is defined and kept constant. The measurements are carried out with three inflation pressure settings. The tyre pressures to be set are determined as a function of the actual wheel loads applied during the test via the manufacturer inflation pressure tables determined according to the following procedure:

– Maximum (nominal) permissible inflation pressure ($IP_{MAX}$)
– Medium inflation pressure according to manufacturer’s specifications with determined load capacity for 50 km/hr
– Minimum inflation pressure according to manufacturer’s specifications with determined load capacity for 10 km/hr ($IP_{MIN}$)

To classify the measurement results, comparative tests are carried out in the test with reference tyres available on the market.

The test runs are carried out on suitable agricultural land under equal conditions. The test areas must be sufficiently large, homogeneous, even and well prepared for the work to be simulated.

The test areas (soil type, soil texture, vegetation if applicable, field-use history) and test conditions (weather, soil moisture and condition of the test area) are documented.

The main technical parameters of the vehicles, that are relevant for the test, are recorded and documented.

The following parameters are determined as essential parameters for the evaluation in the test module “Resources Protection”:

– Soil moisture
– Wheel loads
– Inflation pressures
– Actual driving speed
– Driven distance
– Fuel consumption in l/hr
– Wheel contact areas
– Ground pressure during drive over at 10 cm, 20 cm and 40 cm ground depth (Bolling probes)
– Track depth after passing
– Penetration resistance after passing

## Detailed account of the test results

### Test field

The trials were conducted in July 2023 in the vicinity of Neumünster (SH) on a harvested wheat field after shallow tillage. The soil type at the trial site is silty loam and the trial area is largely homogeneous and even. The volume moisture in the soil measured at random during the trial was 37 % over the trial period at a measurement depth of 0 to 30 cm.

*Figure 3:*
*Test area after passing*

### Vehicle combination, inflation pressures and driving speed

For the test, the tyres to be tested were mounted on a three-axle KAWECO slurry tanker with a 28 m³ capacity. A FENDT 936 Vario served as the tractor, which was equipped with Vredestein Traxion Optimall VF 650/60R38 and VF 750/70R44 tyres.

The slurry tanker was filled with water and the tractor was ballasted with a front weight of 3,300 kg.

Then, the tyre and axle loads were determined. Table 3 shows the results. Due to the design of the slurry tanker there appear differences in loads on the left and right side. For the test, the higher loads on the right wheels were used as a reference.

Table 4 shows the set inflation pressures. In the test, these were based on the manufacturer specifications in the tyre pressure tables for the determined tyre load. The aim was to set the same tyre pressures. In the case of the reference tyre from the non-VF range, different minimum and maximum inflation pressures had to be set than for the VF tyres due to the manufacturer‘s specifications. For the VF reference tyre C, the maximum tyre pressure according to the manufacturer’s specifications was 2.8 bar, which is lower than for the other VF tyres.

Fuel consumption was recorded by the CAN bus during each test run. The average driving speed for all test variants was 5.4 km/hr and the driving distance was approx. 90 m during the test runs.

In the first measurement run, the slurry tanker filled with water was driven with the highest tyre pressure. Subsequently, the tyre pressures were reduced to the medium and to the low tyre pressure.

*Table 3:*
*Tyre loads and axle loads*

| **Tractor** (3,300 kg Frontgewicht) | | | | |
|---|---|---|---|---|
| | **Tyre load [kg]** | | | **Axle load [kg]** |
| FL | 4,400 | 4,500 | VR | 8,900 |
| RL | 7,300 | 7,500 | HR | 14,800 |
| | | | Total weight tractor | 23,700 |
| **Slurry tanker 28 m³ with trailing hose applicator** (filled with water) | | | | |
| | **Tyre load [kg]** | | | **Axle load [kg]** |
| FL | 6,550 | 7,050 | VR | 13,600 |
| ML | 6,300 | 7,100 | MR | 13,400 |
| RL | 6,350 | 7,100 | HR | 13,450 |
| | | | Total weight slurry tanker | 40,450 |
| | | | **Total weight vehicle combination** | **64,450** |

*Table 4:*
*Inflation pressures in the test*

| | Inflation pressure for selected speed | | |
|---|---|---|---|
| | **10 km/hr** | **50 km/hr** | **$IP_{max}$** |
| **Vredestein Flotation Optimall VF 750/60R30.5 187D** | 1.0 bar | 1.7 bar | 3.2 bar |
| **VF Premium competitor A** | 1.0 bar | 1.7 bar | 3.2 bar |
| **VF Premium competitor B** | 1.0 bar | 1.7 bar | 3.2 bar |
| **VF Budget competitor C** | 1.0 bar | 1.7 bar | 2.8 bar |
| **Non-VF equivalent** | 1.2 bar | 2.0 bar | 4.0 bar |
| **Tractor** (front and rear tyre) | 1.1 bar | 1.3 bar | 2.0 bar |

### Wheel contact area

On the rear right tyre, the contact area of each set was visualized by dusting and measured afterwards. The results are shown in Table 5. The wheel contact area increases as the inflation pressure decreases. Compared to the non-VF standard tyre tested, the VF tyre technology enables a higher reduction in the tyre's inflation pressure. This increases the wheel contact area and reduces the pressure exerted on the ground. All tested VF tyres show a significantly increased wheel contact area at all inflation pressures compared to the non-VF standard tyre. Within the tested tyres, the largest wheel contact areas were measured for the Vredestein Flotation Optimall

*Figure 4:*
*Dusted wheel contact area (Vredestein Flotation Optimall VF, IP 1.0 bar)*

*Table 5:*
*Wheel contact area at various inflation pressures*

| | Contact area [cm²] | | |
|---|---|---|---|
| **Inflation pressure** | **1.0 bar** | **1.7 bar** | **3.2 bar** |
| **Vredestein Flotation Optimall VF 750/60R30.5 187D** | 7,725 (100 %) | 6,225 (100 %) | 5,250 (100 %) |
| **VF Premium competitor A** | 7,125 (92.2 %) | 5,775 (92.8 %) | 5,175 (98.6 %) |
| **VF Premium competitor B** | 6,900 (89.3 %) | 5,250 (84.3 %) | 4,500 (85.7 %) |
| **VF Budget competitor C** | 6,675 (86.4 %) | 5,700 (91.6 %) | 4,800 (91.4 %)[1)] |
| **Non-VF equivalent** | 6,450 (83.5 %)[2)] | 4,950 (79.5 %)[3)] | 4,425 (84.3 %)[4)] |

*Table 6:*
*Contact surface pressure at various inflation pressures*

| | Contact surface pressure [kg/cm²] | | |
|---|---|---|---|
| **Inflation pressure** | **1.0 bar** | **1.7 bar** | **3.2 bar** |
| **Vredestein Flotation Optimall VF 750/60R30.5 187D** | 0.92 | 1.14 | 1.35 |
| **VF Premium competitor A** | 1.00 | 1.23 | 1.37 |
| **VF Premium competitor B** | 1.03 | 1.35 | 1.58 |
| **VF Budget competitor C** | 1.06 | 1.25 | 1.48[1)] |
| **Non-VF equivalent** | 1.10[2)] | 1.43[3)] | 1.58[4)] |

[1)] at maximum permissible IP 2.8 bar; [2)] at IP 1.2 bar; [3)] at IP 2.0 bar; [4)] at IP 4.0 bar

VF 750/60R30.5 187D at each of the three inflation pressures. At low inflation pressure, the wheel contact areas of the Vredestein Flotation Optimall VF 750/60R30.5 187D were 16 % larger compared to the standard tyre and 8 % to 14 % larger compared to the other VF tyres.

In the case of the Vredestein Flotation Optimall VF 750/60R30.5 187D, the contact area increases by 2,475 cm² when the tyre's inflation pressure is lowered by 2.2 bar. This represents the maximum increase in contact area across all tyres in this test.

The increase in contact area at constant wheel load means a reduction in contact surface pressure per square centimeter of contact area. Taking the Vredestein Flotation Optimall VF 750/60R30.5 187D as an example, the contact surface pressure can be reduced from 1.35 kg/cm² to 0.92 kg/cm² (-32 %) due to the tyre's inflation pressure reduction of 2.2 bar. This has a significant impact on soil protection, because a lower contact surface pressure means a lower track depth and also a lower soil pressure in the deep soil layers. The individual results are shown in Table 6.

**Ground pressure**

While passing, the ground pressure was measured in the test using Bolling tubes.

The soil pressure and its propagation are described in the literature as isobars. The decrease of soil pressure in depth is significantly influenced by the contact area. The pressure under the track in the soil decreases with a higher depth. It is higher for the non-VF standard tyre than for the VF tyres in all test variants. At 10 cm soil depth, the pressure generated by driving over is very closely correlated with the tyre inflation pressure. In the deeper measurement zones (20 cm and 40 cm), the effect of the different wheel contact areas becomes apparent. The larger the wheel contact area, the lower the measured pressure at depth. At 40 cm soil depth, the VF tyres generate the lowest pressure at low inflation pressure due to the resulting larger contact area. At the high tyre pressures of 3.2 bar in the test, the VF tyres from the premium segment differ only slightly in the generated ground pressure at all three ground depths. This high tyre pressure was not approved for the reference tyre from the budget range, and the variant had to be driven with 2.8 bar. At medium inflation pressure (1.7 bar) and at low inflation pressure (1.0 bar), the VF tyre from the budget range tends to generate higher ground pressures than the VF tyres from the premium range at all ground depths. Within the VF Premium range, the tested tyres differ only slightly from each other at 20 cm soil depth and higher inflation pressures.

At low inflation pressure, the Vredestein Flotation Optimall VF 750/60R30.5 187D proves 15 % to 20 % lower ground pressure at 20 cm soil depth than the other VF tyres tested. At 40 cm soil depth, the Vredestein Flotation Optimall VF 750/60R30.5 187D at 1.0 bar inflation pressure has the lowest value of 0.12 bar ground pressure in the premium VF tyre range and across all tyre variants used in the test conducted. The generated ground pressure was 50 % lower compared to the budget VF tyre (0.12 bar vs. 0.24 bar) and 25 % to 30 % lower compared to the VF tyres from the premium segment (0.12 bar vs. 0.16 bar and 0.18 bar). These low values close to zero clearly show the potential of VF technology. Causing a soil pressure of only 0.12 bar at a depth of 40 cm

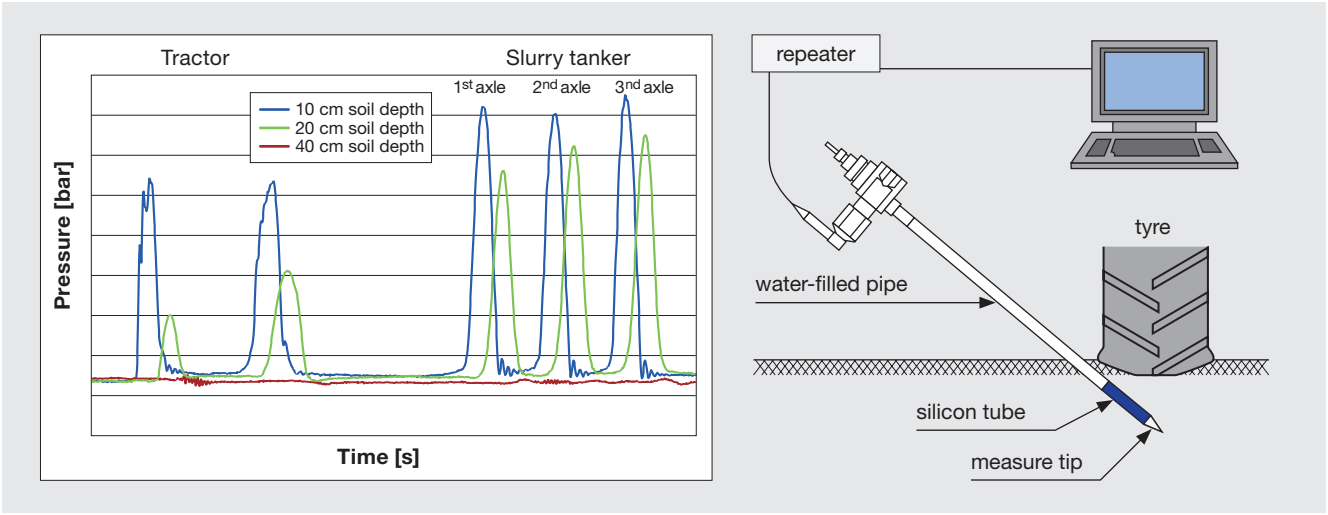


*Figure 5:*
*Schematic representation of the soil pressure measurement by means of Bolling tubes*

with a wheel load of 7,100 kg represents a major step forward in soil preservation. Figure 6 shows the individual results.

### Track depth

The relationship between the contact area, the contact area pressure and the resulting soil pressure can be seen in the track depth. As the track depth increases, so does the risk of compaction and the need for more intensive tillage to loosen and level the tracks. Figure 7 shows the track depths measured in the test under the praxis conditions.

The Vredestein Flotation Optimall VF 750/60R30.5 187D proves the lowest track depths in all three inflation pressure variants in the test conducted. On average across all inflation tyre pressure variants, its track depth was 24 % less than that of the runner-up of the VF competitors.

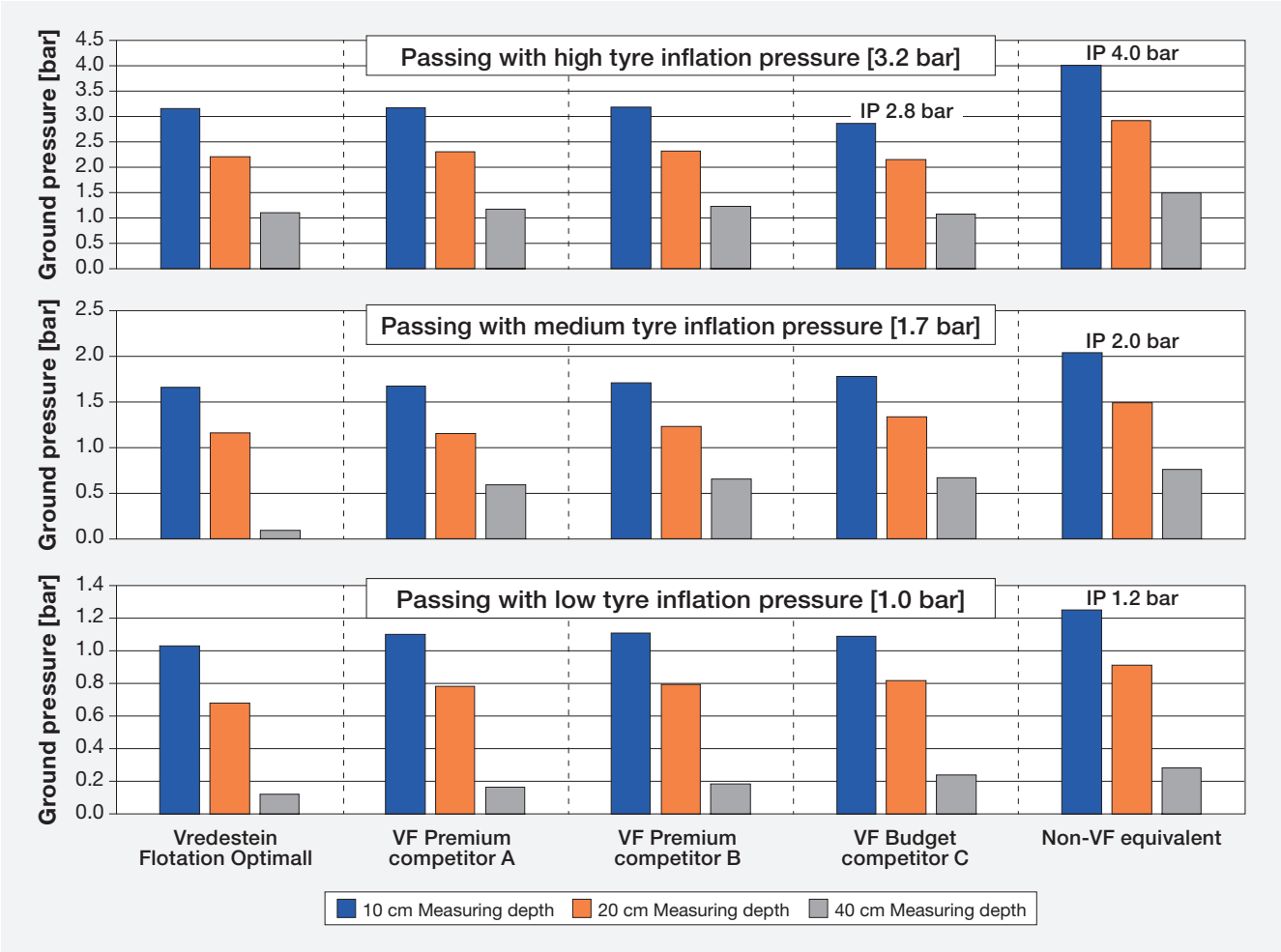


*Figure 6:*
*Ground pressure at measurement depths of 10 cm, 20 cm and 40 cm*

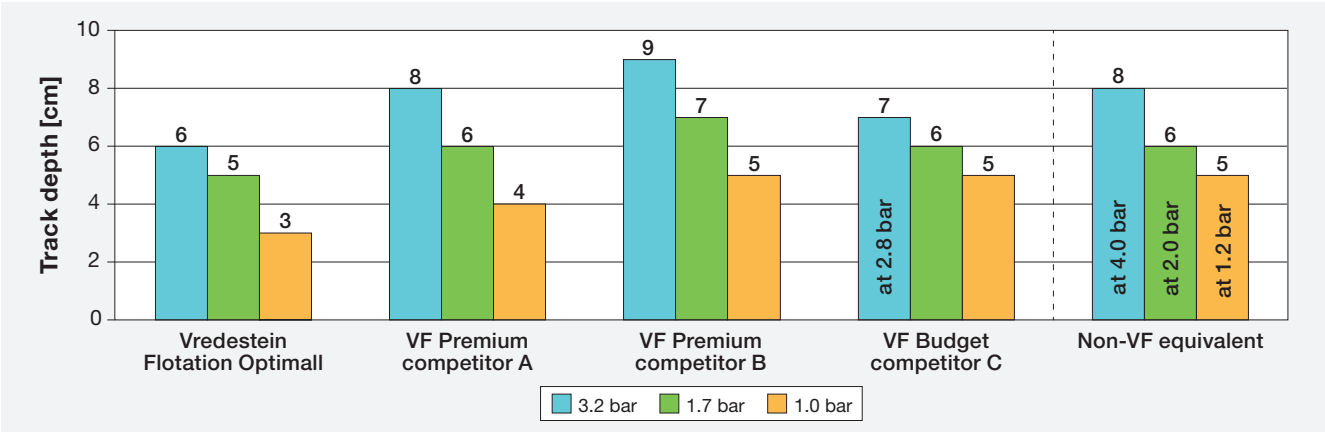


*Figure 7:*
*Track depth*

### Penetration resistance

After driving over, the penetration resistance was measured in the track with the penetrometer. The higher the forces to be applied for pressing with the penetrometer, the more the soil was compacted by driving over. From a soil depth of approx. 25 cm, the penetrometer readings show clearly increasing indentation resistances, indicating the tillage horizon. Depending on the design and construction, the different tyres behave themselves differently in the track and dissipate the force in different directions into the ground. Such design-related differences are shown in the test by different penetration resistances in the shoulder or in the center of the tyre track. Increasing penetration resistance is measured in the tyre track shoulders as the tyre's inflation pressure decreases. Compared to the other tyres tested, the Vredestein Flotation Optimall VF 750/60R30.5 187D is in the lower to medium range. Especially in the first 0 to 15 cm measuring depth, the penetration resistances of the VF Premium reference tyre A are about twice as high as those of the Vredestein Flotation Optimall VF 750/60R30.5 187D. The situation is reversed in the center of the track. With increasing tyre inflation pressures, the penetration resistance increases, after passing. The Vredestein Flotation Optimall VF 750/60R30.5 187D tends towards higher values here, but these are still well below the measured penetration resistances of VF Premium reference tyre B.

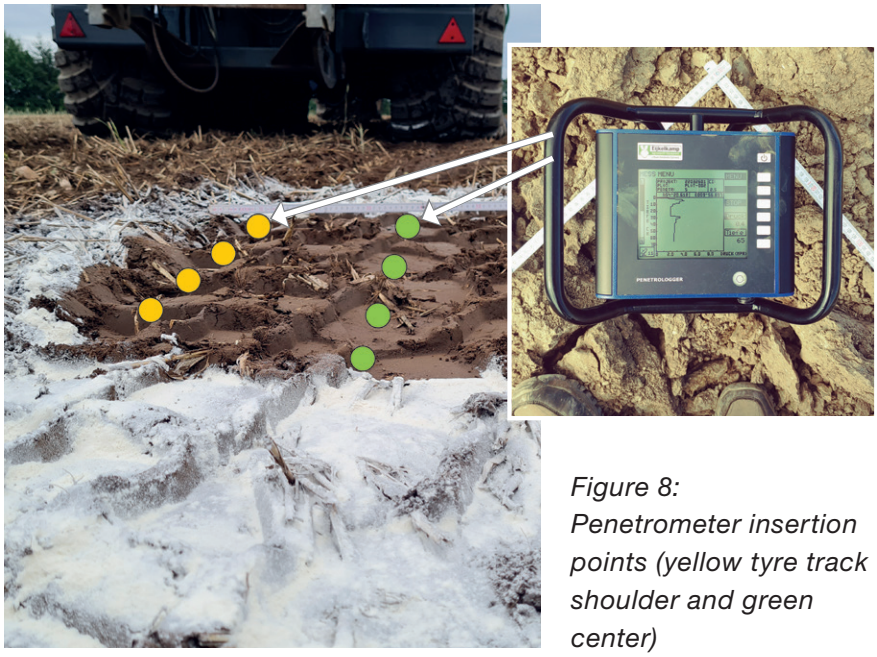

*Figure 8: Penetrometer insertion points (yellow tyre track shoulder and green center)*

Figure 8 shows the insertion points for the penetrometer measurement.

### Fuel consumption

The measured fuel consumptions are subject to a strong scattering, so that some of the obtained results can only be evaluated as tendencies. The expected picture of high consumption at high inflation pressures is shown in Figure 9. The mean value of 17.7 [l/hr] measured across all tyres and inflation pressure variants is at an expected level for medium-heavy work in the field. The range extends from 14.9 l/hr to 20.5 l/hr. Lowering the tyre pressure from 3.2 bar to 1.7 bar leads to a significant reduction in fuel consumption when driving in the field. The further reduction of the tyre pressure tends to lead to an increase in fuel consumption, which, however,

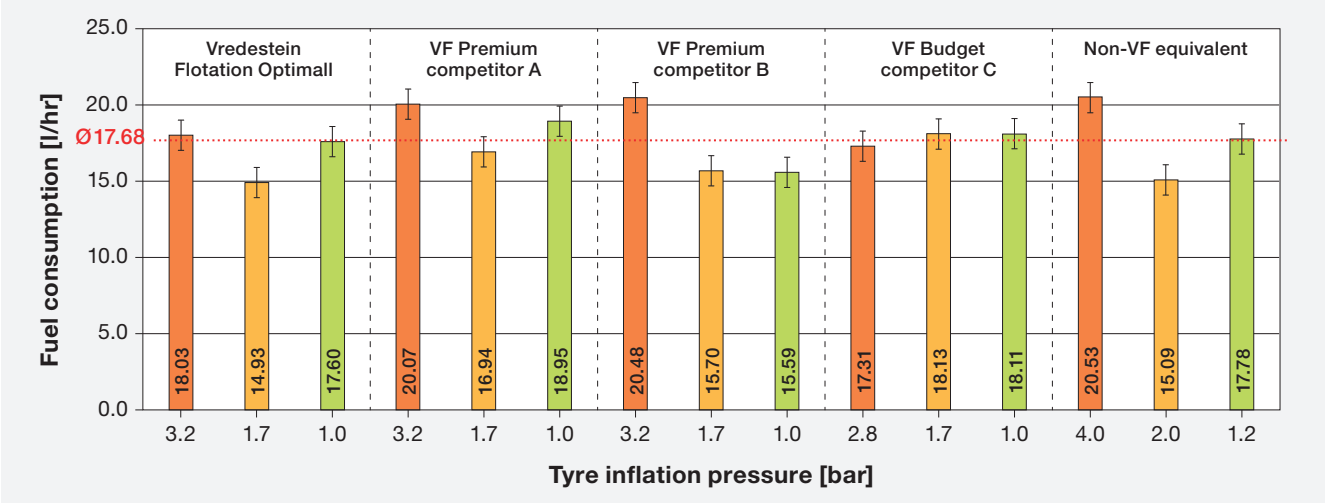


*Figure 9: Fuel consumption [l/hr] with different tyres and inflation pressure variants*

cannot be statistically confirmed. There are certain differences in the results between the tyre variants, but these cannot be statistically confirmed due to the scattering of the individual values.

In the test conducted, the Vredestein Flotation Optimall VF 750/60R30.5 187D had the lowest fuel consumption in the 1.7 bar tyre pressure variant when compared with the other VF tyres.

The fuel consumption determined for the Vredestein Flotation Optimall VF 750/60R30.5 187D in this tyre pressure variant was 14.9 l/hr and around 1 l/h (VF reference tyre B-Premium) to 3 l/h (VF reference tyre C-Budget) lower than for the other VF tyres tested. In the other two tyre pressure variants, the Vredestein Flotation Optimall VF 750/60R30.5 187D also tended to have lower fuel consumption in the test.

## Conclusion

VF technology also represents a significant improvement in the trailer tyre segment. According to the authors, factors such as soil preservation (track depth, soil pressure or penetration resistance) are to be weighted higher than fuel consumption for the farmer and society.

Within the tested tyres, the Vredestein Flotation Optimall VF 750/60R30.5 187D measured the largest wheel contact areas at all three set inflation pressures, which had a positive effect on the corresponding soil pressures. At the lowest tyre pressure, the wheel contact areas of the Vredestein Flotation Optimall VF 750/60R30.5 187D were 16 % larger compared to the standard tyre and 8 % to 14 % larger compared to the other VF tyres.

The new development of Vredestein, the Flotation Optimall VF 750/60R30.5 187 D, had a contact area pressure of less than one kg/cm² (0.92 kg/cm²) at 1.0 bar air pressure, making it the only tyre with a value below 1 out of 5 different tyres tested. This sets new standards in the segment of trailer tyres, which have to cope with high and changing wheel loads.

At 40 cm soil depth, the Vredestein Flotation Optimall VF 750/60R30.5 187D at 1.0 bar inflation pressure had the lowest value with 0.12 bar ground pressure. In the test carried out, the ground pressure generated was 50 % lower compared to the budget VF tyres (0.12 bar vs. 0.24 bar) and 25 % and 30 % lower compared to the VF tyres from the premium segment (0.12 bar vs. 0.16 bar or 0.18 bar).

These low values close to zero clearly show the potential of VF technology. With a wheel load of 7,100 kg, causing a soil pressure of only 0.12 bar at a depth of 40 cm represents a major step forward in soil preservation.

On average across all tyre pressures, the Vredestein Flotation Optimall VF 750/60R30.5 187D proved a 24 % less track depth than the runner-up in the VF range.

The penetration resistances measured in the tyre track shoulders of the Vredestein Flotation Optimall VF 750/60R30.5 187D are in the lower to medium range compared to the other tyres tested. The Vredestein Flotation Optimall VF 750/60R30.5 187D tended to have a higher penetration resistance in the center of the tyre track, but this is still well below the measured penetration resistance of other VF Premium reference tyres.

In the test carried out, the Vredestein Flotation Optimall VF 750/60 R30.5 187D had the lowest fuel consumption in the 1.7 bar inflation pressure variant when compared with the other VF tyres. In the other two pressure variants, the Vredestein Flotation Optimall VF 750/60R30.5 187D also tended towards lower fuel consumption in the test.

The agricultural trailer tyre Vredestein Flotation Optimall VF 750/60 R30.5 187D was able to convince with the specified test criteria in the conducted DLG test. Based on the results achieved, the agricultural trailer tyre Vredestein Flotation Optimall VF 750/60R30.5 187D is awarded with the DLG-APPROVED quality mark for the “Resources Protection” test module.

## Further information

**Testing agency**

DLG TestService GmbH, Gross-Umstadt location, Germany, in cooperation with the Kiel University of Applied Sciences, Faculty of Agriculture, Dept. Agricultural Engineering

The tests are conducted on behalf of DLG e.V.

**DLG test framework**

DLG Test Framework for Agricultural Tyres (current as 07/2023)

**Department**

Vehicle technology

**Examiner**

Prof. Dr. Yves Reckleben (University of Applied Sciences Kiel) / Dr. Ulrich Rubenschuh (DLG)*

**Photos and graphics**

DLG, Kiel University of Applied Sciences, Department of Agriculture, Dept. Agricultural Engineering and APOLLO Vredestein (Europe) B.V.

* Author

## DLG – the open network and professional voice

Founded in 1885 by the German engineer Max Eyth, DLG (Deutsche Landwirtschafts-Gesellschaft – German Agricultural Society) is an expert organisation in the fields of agriculture, agribusiness and the food sector. Its mission is to promote progress through the transfer of knowledge, quality standards and technology. As such, DLG is an open network and acts as the professional voice of the agricultural, agribusiness and food sectors.

As one of the leading organisations in the agricultural and food market, DLG organises international trade fairs and events in the specialist areas of crop production, animal husbandry, machinery and equipment for farming and forestry work as well as energy supply and food technology. DLG's quality tests for food, agricultural equipment and farm inputs are highly acclaimed around the world.

For more than 130 years, our mission has also been to promote dialogue between academia, farmers and the general public across disciplines and national borders. As an open and independent organisation, our network of experts collaborate with farmers, academics, consultants, policymakers and specialists in administration in the development of future-proof solutions for the challenges facing the agriculture and the food industry.

**Leaders in the testing of agricultural equipment and input products**

The DLG Test Center Technology and Farm Inputs and its test methods, test profiles and quality seals hold a leading position in testing and certifying equipment and inputs for the agricultural industry. Our test methods and test profiles are developed by an independent and impartial commission to simulate in-field applications of the products. All tests are carried out using state-of-the-art measuring and test methods applying also international standards.

Internal test code DLG: 2307-0025



**DLG TestService GmbH**
**Groß-Umstadt location**
Max-Eyth-Weg 1 • 64823 Gross-Umstadt • Germany
Phone: +49 69 24788-600 • Fax: +49 69 24788-690
Tech@DLG.org • www.DLG.org