Fliegl
BAU- & KOMMUNALTECHNIK

Wir sind Fliegl.

ASW STONE TRUCK
ASPHALTPROFI-THERMO

Transport vehicles with push-off function are well established as the global state of the art!

Made in GERMANY

Tried-and-tested technology

www.fliegl-baukom.de

GB

»Made in Germany – made by Fliegl«

Quality from the off...

...with state-of-the-art production

Thanks to the ultra-modern plant in Mühldorf, even more customers can benefit from innovative and practical Fliegl solutions. As well as Fliegl Bau- und Kommunaltechnik, the complex is also home to Fliegl Agrartechnik and Fliegl Dosiertechnik.

More than 380 employees work across the 30-hectare site of the company headquarters. The new plant boasts cutting-edge manufacturing facilities for the production of thermal push-off vehicles, water tankers, tippers and concrete mixing technology.

Wir sind Fliegl.

Construction of truck chassis

Modern paint shop – optimum surface protection for your new vehicle

Paint preparation with shot blasting

High-tech welding robots ensure
maximum weldseam quality

Sophisticated tube and sheet laser systems enable quick and precise processing of complex elements.

VEHICLES WITH THE TRIED-AND-TESTED PUSH-OFF SYSTEM

Complete emptying, even of highly viscous material

(loam, wet ground, clay, etc. are handled with ease, even in winter)

Very low load centre of gravity

→ **Improved handling**

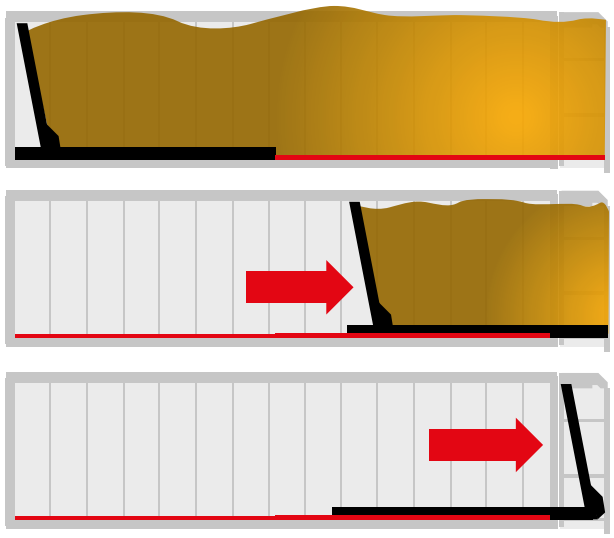
→ **Enhanced transport performance**

Shaping made easy: **Extremely low loading height**

Resource friendly

Say goodbye to tipping!

Faster unloading



The push-off system
Your benefits:

- Ideal for heavy goods
- Maximum stability
- Tried-and-tested system
- Faster unloading

Complete emptying, even of highly viscous asphalt types (OPA, PMA, stone mastic, rubber-modified, etc.)

Use in Siberia at -27 °C

No manual cleaning or scraping of the tipper bridge required

There is no material build-up, which would otherwise reduce the load volume and thus the effective payload over time.

FOR GREATER WORK SAFETY

The push-off technology ensures maximum stability and protection against tipping.
The danger zones during unloading are minimal, thereby enhancing work safety.
Power lines, avenues, bridges or manual cleaning present a significant risk for tippers.
Push-off technology allows you to eliminate these risks.



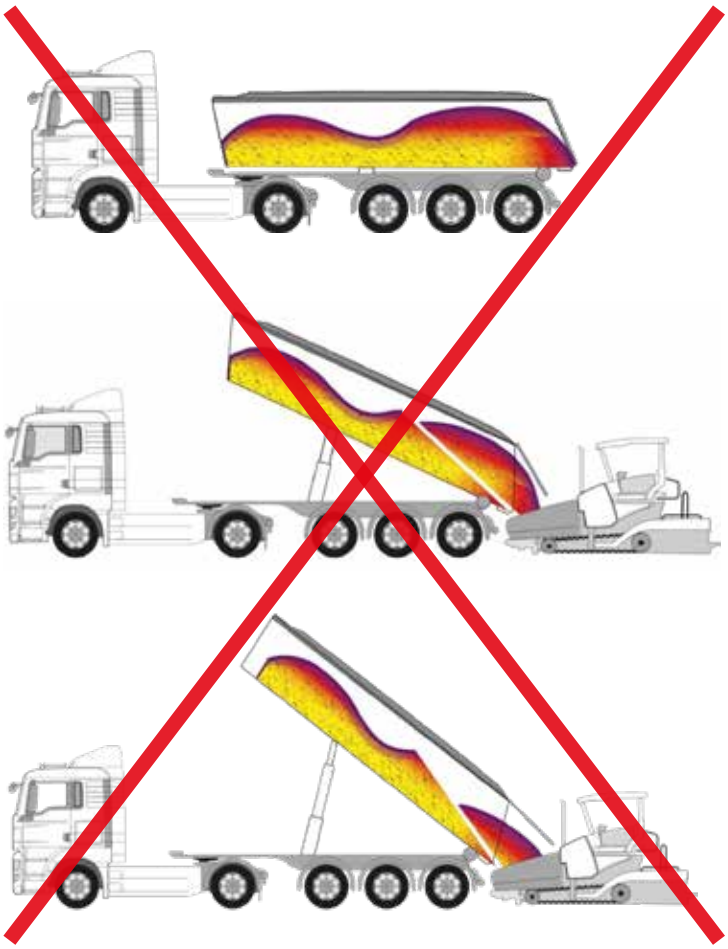


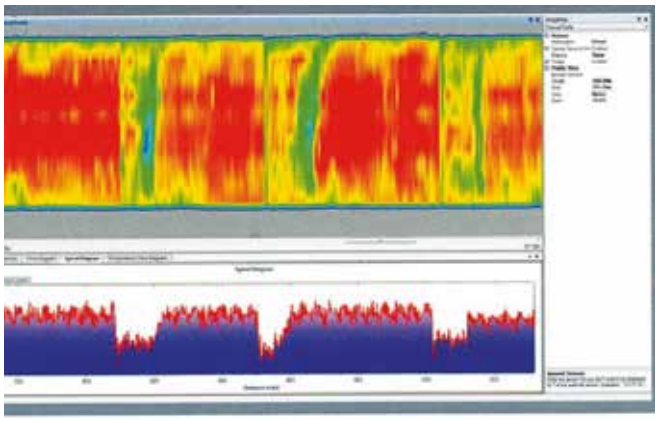





Benefits of push-off trailers: No follow-up costs, no unnecessary downtimes, no additional digger required, lower material costs

Temperature profile when unloading with thermal tippers

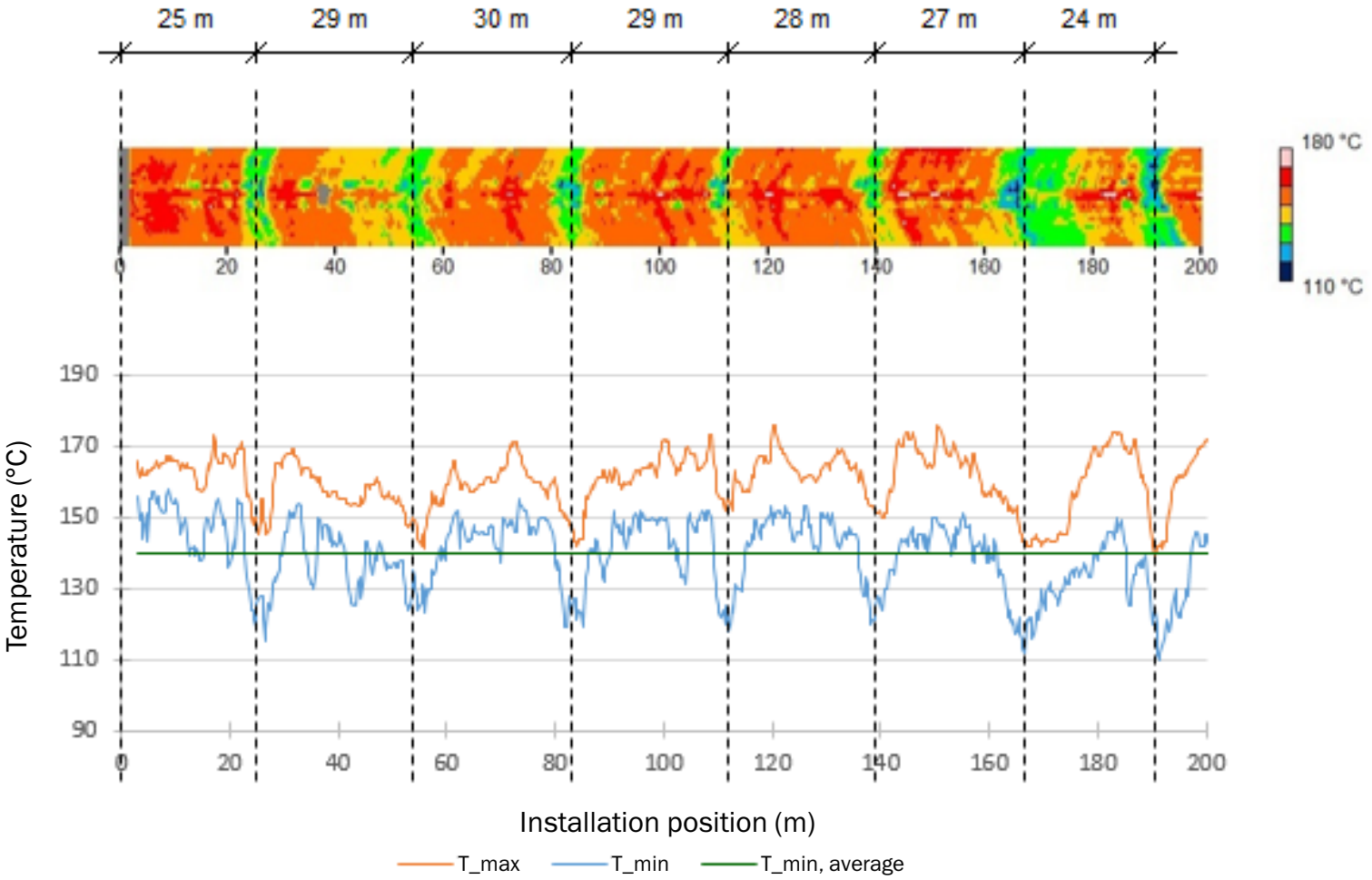




"Changing vehicles is often a reason for temperature differences in the mix and can quickly be identified as a clear cold points."

Source: MOBA

⟶Usually the cause of premature road damage



Sources

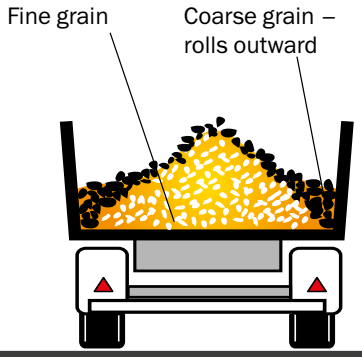
Rok Rošer Master Thesis TU Ljubljana UDC: 625.7:691 (043.3)

Temperature Segregation in Asphalt Mixture Placement

PROBLEMS IN ASPHALT ROAD CONSTRUCTION

WITH CONVENTIONAL TRANSPORT TECHNOLOGY

1) Mechanical segregation during transport and unloading

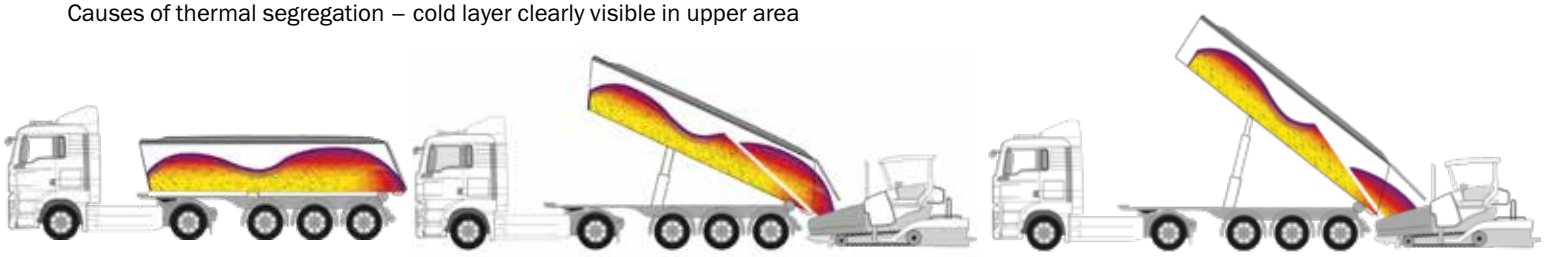


Coarse grain clusters after installation!

2) Thermal segregation during asphalt transport

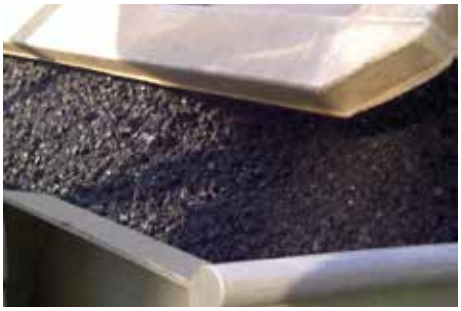
Temperature profile when unloading (thermal tipper)

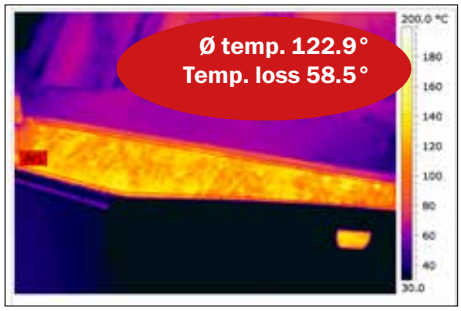
Causes of thermal segregation – cold layer clearly visible in upper area

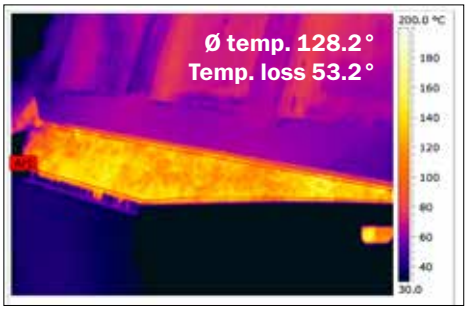


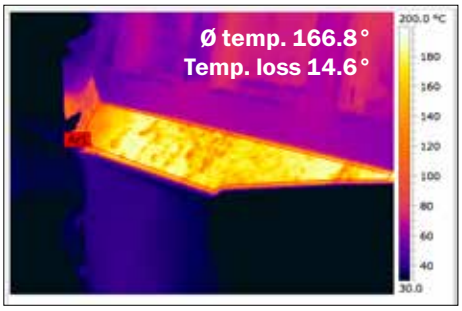
Cold material from the top layer (crust formation) slides into the paver first.

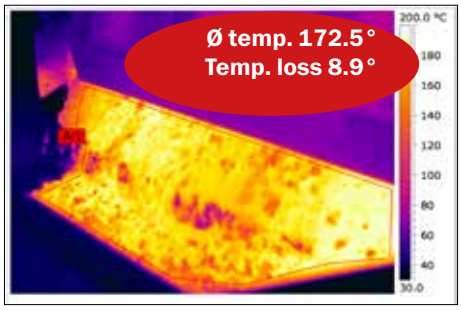
→ Cold material comes first and is followed by hot material

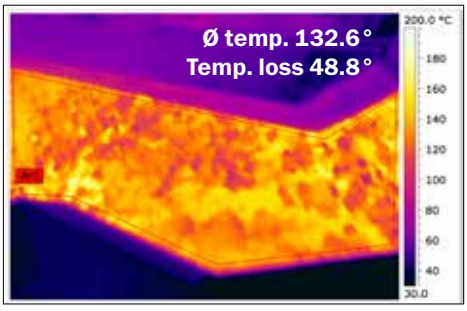






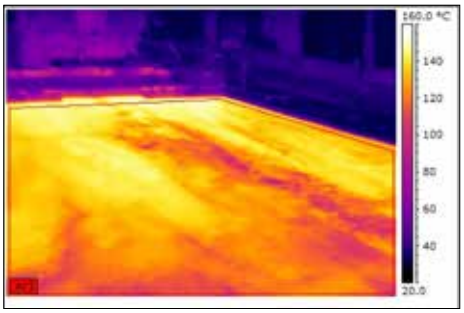


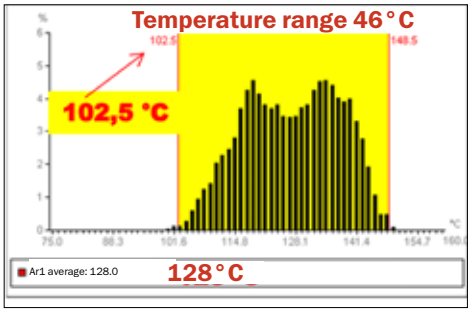




→ With tipper vehicles, significant temperature differences can exist before the 1st roller pass

Tonnage per truck load / **Installation width (m) x installation depth (m) x 2.5 to/m³** = **Spacing (m) of clusters** (course grain and cold spots)





Cold spots (approx. 15-35 m²) often occur cyclically and will later appear as damage points

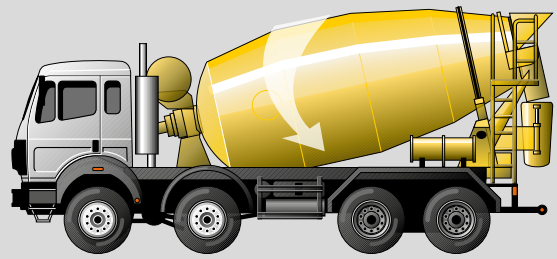
SOLUTION: CONTINUOUS MIXING

BASIC REQUIREMENT FOR HIGH INSTALLATION QUALITY

Transporting concrete?

Significant segregation with tippers

-> »Cheap at all costs?«



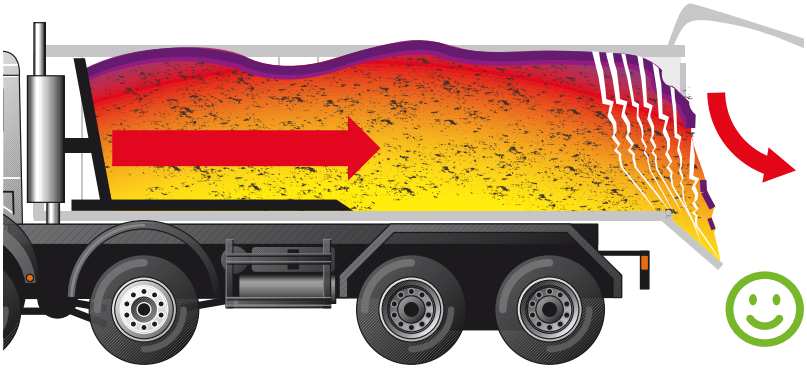
Continuous mixing

-> »Quality comes first!«

Transporting asphalt?

ONLY WITH PUSH-OFF TECHNOLOGY

Gradual mechanical and thermal mixing
No problems with obstacles such as overhead power lines, avenues, traffic lights, underpasses, etc.

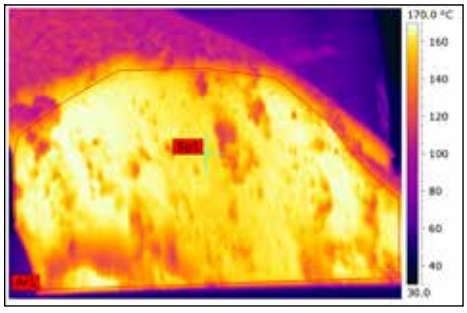


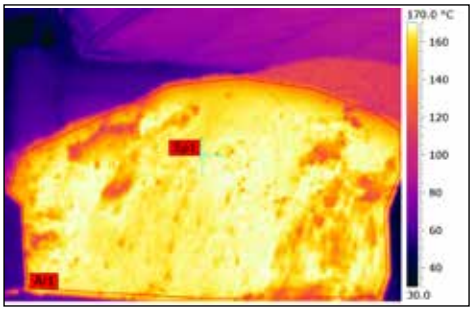
CONTINUOUS MIXING

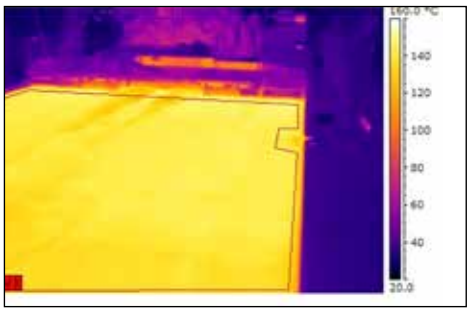
during the entire unloading process
(of temperature as well as bitumen and binder content)

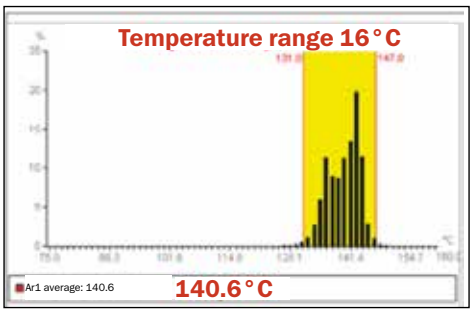
- Even grain size distribution (acc. to grading curve)
- Clean and complete emptying – without using diesel as a release agent

»Quality comes first!«





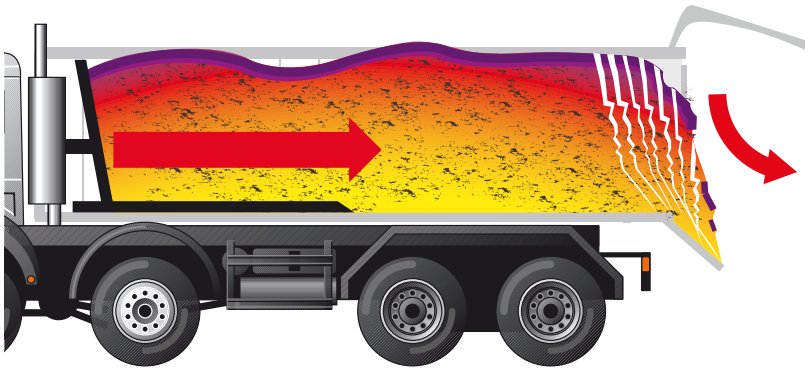


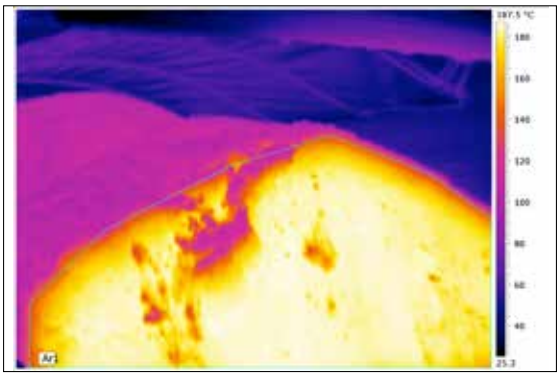


CONTINUOUS MIXING WHILE UNLOADING WITH ASW »ASPHALTPROFI-THERMO«

Construction site in Munich, Luise-Kisselbach Str.
Special tunnel application with reduced-temperature asphalt

Push-off trailer





Environmental protection due to lower CO_2 emissions during asphalt production
Production temperature can be reduced on the mixing system

- Still very high and homogeneous installation quality
- Fewer resources – less CO_2, less gas, oil, coal dust
- Longer service life of asphalt surfaces

Request additional catalogues!

After docking, the gradual transfer of the mix to the paver begins immediately, with optimum heat stability.

Further advantage: no paver downtimes!

Optimum homogeneity and asphalt quality
Significantly reduced separation of temperature and grain structure

Thermal pack, temperature indicators

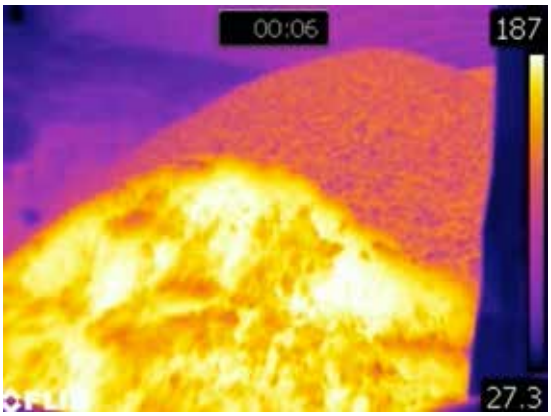
4 temperature indicators per vehicle

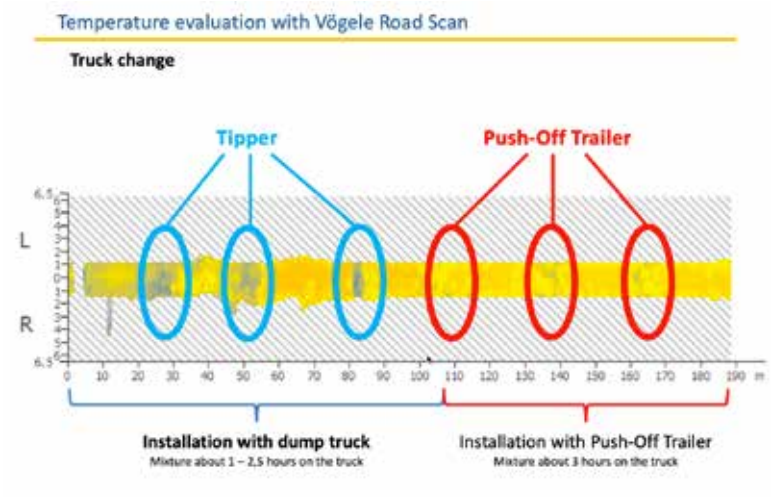
HIGH INSULATION

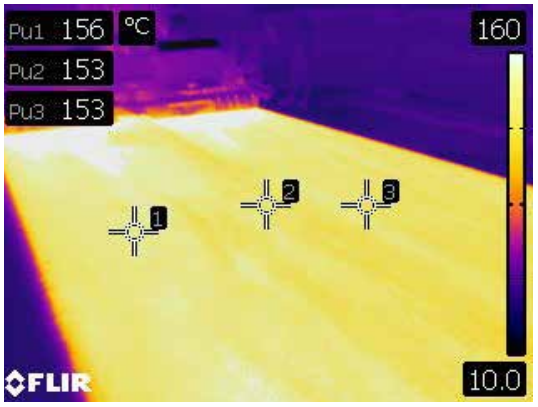
- Body equipped with thick insulation layer, measuring over 70 mm in some areas
- High heat insulation – lambda value below 0.028 W/m°K
- Fully moisture-resistant ⟶ insulation absorbs NO WATER
- Temperature stability in continuous use above 200°C
- Impact and vibration resistance

YouTube: Asphalt Green Deal

YouTube: Asphalt push-off thermal view

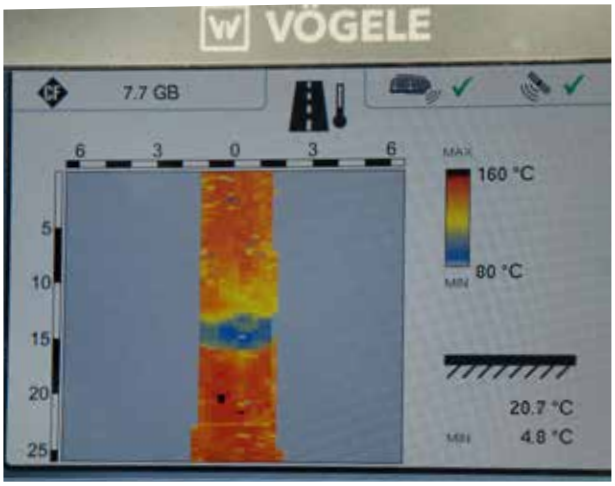




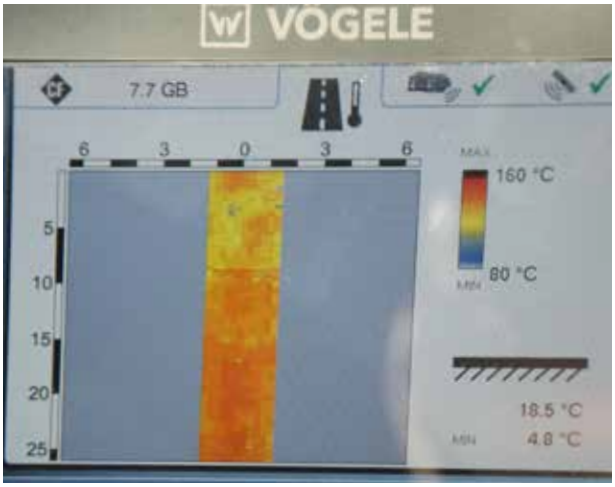


Long service life of road surface
Optimum compaction with minimal void content

Temperature profile when switching trucks – studies conducted by the Slovenian testing institute



Asphalt transport with tipper vehicles



Asphalt transport with push-off vehicles

"WIESEL" ATTACHMENT
PROFESSIONAL FILLING OF EXCAVATIONS

YouTube: Wiesel spreading screw

Installation of asphalt, sand and minimally coarse-grained gravel for ancillary areas such as pavements and excavations by municipal suppliers – without diggers (e.g. sewage, water, telecommunications, fibre optics, etc.)
Direct and precise transfer to asphalt pavers

- Reduces manual work to a minimum
- Quick and effective
- Hot and homogeneous
- Durable

Following initial assembly, the **"Wiesel" spreading screw** can be easily **attached on-site and can be retrofitted to virtually all push-off vehicles at any time**

ACCESSORIES

e.g. remote control, centring plates, discharge chute, etc.

ProSave control with radio remote, as standard

Oil cooler (optional)

Precision unloading in road construction

Centring plates direct the asphalt into the middle of the paver bucket
→ reduces mechanical/thermal segregation

Safe spreading in path and road construction; centring plates with approx. 2 m spreading width

ASW with discharge chute (retrofittable and attachable on-site)

- For manual installation in (municipal) road construction

Potentiometer for precision unloading (optional)

Path construction with discharge chute

- Precise spreading, e.g. in path and road construction

ASW STONE ONROAD TRUCK BODY

Low net weight – maximum payload – high stability

ASW 4715

Construction in Switzerland
ASW 5729

Construction in Mainz
ASW 4729

ASW 5229
Use in Siberia

ASW 5215
Use in tunnelling

Construction in Switzerland
ASW 6229

Construction in Mainz
ASW 5215

Vehicle handover 15th + 16th vehicle
Payload over 18 tonnes, ASW 5215 "Mega"

Construction in Tirol
ASW 5215

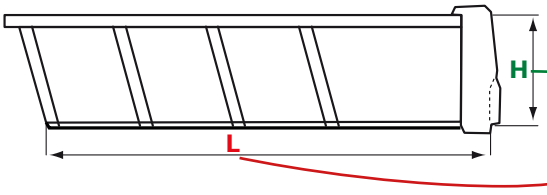
Construction in Brandenburg
ASW 5715

Winter use in Russia
ASW 5240

Truck body

Technical payload: 20, 25, 30 t depending on body type / equipment

* Virtually all vehicle manufacturers specify the body capacity slightly heaped (e.g. according to SAE...)
* Note: The load volume may be slightly reduced when using a tarpaulin



Type	L x W x H in mm	Capacity approx. m³ * slightly heaped / unheaped	Minimum oil consumption Consumed oil volume from tank in litres (oil volume for push-off process)
4715	4730 x 2370 x 1150	**13.5** / 12.2	16.5 (48.0)
4729	4730 x 2370 x 1290	**15** / 13.7	16.5 (48.0)
4740	4730 x 2370 x 1400	**16.5** / 14.9	16.5 (48.0)
5215	5230 x 2370 x 1150	**15** / 13.6	18.5 (54.0)
5229	5230 x 2370 x 1290	**17** / 15.2	18.5 (54.0)
5240	5230 x 2370 x 1400	**18** / 16.5	18.5 (54.0)
5260	5230 x 2370 x 1600	**21** / 19.2	18.5 (54.0)
5715	5730 x 2370 x 1150	**16.5** / 15.0	20.0 (58.0)
5729	5730 x 2370 x 1290	**18.5** / 16.8	20.0 (58.0)
5740	5730 x 2370 x 1400	**20** / 18.2	20.0 (58.0)
5760	5730 x 2370 x 1600	**23** / 21	20.0 (58.0)
6215	6230 x 2370 x 1150	**18** / 16.3	22.0 (64.5)
6229	6230 x 2370 x 1290	**20** / 18.3	22.0 (64.5)
6740	6730 x 2370 x 1400	**24** / 21.5	27.5 (75.5)
7229	7230 x 2370 x 1290	**24** / 21.5	30.5 (91.0)
7240	7230 x 2370 x 1400	**26** / 23.5	30.5 (91.0)
8229	8230 x 2370 x 1299	**27** / 25.2	36.0 (105.0)

IDEAL FOR ROAD CONSTRUCTION

ASS SEMITRAILER

Extremely low load centre of gravity
→ significantly better handling in corners

Very low transfer height → beneficial when working with wheel loaders

Type		372 Mega 7229
Lateral body height		1,290
Capacity slightly heaped / unheaped*	approx. m³	**24** (21.5)
Total trailer weight	up to ...	40,000
Gross train weight*	kg	40,000/44,000
Body length	mm	7,230
Internal body width	mm	2,370
Number of axles		3
Minimum oil consumption Consumed oil volume from tank Oil volume for push-off process	approx. l	30.5 (91.0)
Sliding tarpaulin		Standard
Thermal insulation		Standard
Paver brake		Standard
Reversing camera		Standard
Extremely low loading height		Standard

Czech Republic
ASS 372 Mega paving a country road

ASS 377/382 extra long (UK)

ASS 372/377-1400 with slider telescopic axle (Scandinavia)

Use in Holland: 50 t total weight ASS 372/1400

ASS 272 Stone 7229	ASS 272 Stone 7240	ASS 272 Stone Compact 7229	ASS 372 Stone 7229	ASS 372 Stone 7240	ASS 372 Stone 7260	ASS 377 Stone (slider) extra long* telescopic 7740	ASS 382 Stone 8229	ASS 382 Stone 8240	ASS 382 Stone 8260	ASS 382 Stone extra long* 8229	ASS 382 Stone extra long* 8240	ASS 382 Stone extra long* 8260
1,290	1,400	1,290	1,290	1,400	1,600	1,400	1,290	1,400	1,600	1,290	1,400	1,600
24 (21.5)	**26** (23.5)	**24** (21.5)	**24** (21.5)	**26** (23.5)	**29** (26.5)	**27.5** (25.5)	**27** (24.5)	**29** (26.5)	**33.5** (30.5)	**27** (24.5)	**29** (26.5)	**33.5** (30.5)
33,000/35,000		33,000	42,000			42,000/45,000	42,000			42,000		
40,000/44,000		38,000/40,000	50,000			50,000/52,000	50,000			50,000		
7,230		7,230	7,230			7,730	8,230			8,230		
2,370		2,370	2,370			2,370	2,370			2,370		
2		3	3			3	3			3		
30.5 (91.0)		30.5 (91.0)	30.5 (91.0)			33.5 (98.5)	36.0 (105.0)			36.0 (105.0)		
Optional		**Optional**	**Optional**			**Optional**	**Optional**			**Optional**		
Optional		**Optional**	**Optional**			**Optional**	**Optional**			**Optional**		
Optional		**Optional**	**Optional**			**Optional**	**Optional**			**Optional**		
Optional		**Optional**	**Optional**			**Optional**	**Optional**			**Optional**		
Standard		**Standard**	**Standard**			**Standard**	**Standard**			**Standard**		

Other body sizes or payloads available on request
* Extra long: dimension from kingpin to last axle adapted to national specifications (e.g. UK, Scandinavia, etc.)
* Capacity slightly heaped: Virtually all vehicle manufacturers specify the body capacity slightly heaped (e.g. according to SAE...)
* Note: The load volume may be slightly reduced when using a tarpaulin
* Gross train weight can vary by country

REFERENCES FROM SCANDINAVIA

ASS 377 telescopic Scandinavia

ASS 382 with telescopic axle
Perm. total weight 58 t (Scandinavia)

Scandinavia ASS 382
Unloading coarse gravel

Scandinavia
ASS 382 (slider)

YouTube: Fliegl push-off technology in Scandinavia

REFERENCES FROM GREAT BRITAIN, IRELAND

CONTINUOUS ASPHALT PAVING, WITHOUT "STOP AND GO"

E.g. avenues, municipal road construction, etc.

ASS 372 Mega
Paving avenues

Municipal road construction
Paving with coloured asphalt

Construction in Heidelberg
ASS 372-1400

ASS 272-1400

ASS 372-1600

GREATER INSTALLATION SPEED / DAILY OUTPUT IN ASPHALT PAVING

No damage to trees on avenues

ASW in railway construction

Aggregates for steel industry in Japan

Use in Holland ASW 6740
perm. total weight: 50 t

Vehicle handover in Japan

AIRPORT RECONSTRUCTION

Asphalt paving with uninterrupted air traffic
without impairing air traffic control

☹ **Use of tippers would require full closure of airport!**

Construction at Hamburg airport

Belgrade airport – Vinci Concessions – installation of over 270,000 tonnes of asphalt

Construction at Cologne airport
ASW 5215

Airfield in Holland
ASS 372-7260

Hamburg airport

Construction at Salzburg airport
Full reconstruction of runway

YouTube: Fliegl - Airport

Road rehabilitation in Belgium
ASS 372-1400

Rehabilitation of A73

Construction in Vienna
Typical requirements in municipal road construction

Construction site report of ASFINAG: "Tunnel reconstruction – push-off technology delivers high-quality road surface!

Using push-off technology, approx. 150,000 m² of asphalt were installed with 50,000 t of mix in the Kaisermühlen Tunnel, Vienna's longest road tunnel."

Dyke construction
Asphalt paving on extreme inclines

HKL: HOOK LIFT ROLL-OFF BODY WITH PUSH-OFF TECHNOLOGY

HKL 5715

Technical data for hook lift roll-off body

Type	L x W x H in mm	Total length approx. mm	Capacity approx. in m³ slightly heaped / unheaped	Thermal pack	Control block for hydraulics	ProSave control with radio remote control	Sliding tarpaulin
HKL 4715	4730 x 2370 x 1150	5700	**13.5** / 12.2	Optional	Optional	Optional	Optional
HKL 4729	4730 x 2370 x 1290	5700	**15.0** / 13.7	Optional	Optional	Optional	Optional
HKL 4740	4730 x 2370 x 1400	5700	**16.5** / 14.9	Optional	Optional	Optional	Optional
HKL 5215	5230 x 2370 x 1150	6400	**15.0** / 13.6	Optional	Optional	Optional	Optional
HKL 5229	5230 x 2370 x 1290	6400	**17.0** / 15.2	Optional	Optional	Optional	Optional
HKL 5240	5230 x 2370 x 1400	6400	**18.0** / 16.5	Optional	Optional	Optional	Optional
HKL 5715	5730 x 2370 x 1150	7000	**16.5** / 15.0	Optional	Optional	Optional	Optional
HKL 5729	5730 x 2370 x 1290	7000	**18.5** / 16.8	Optional	Optional	Optional	Optional
HKL 5740	5730 x 2370 x 1400	7000	**20.0** / 18.2	Optional	Optional	Optional	Optional

TRANSPORT OF LIME, SALT AND BACKFILL MATERIALS*

Unloading wet lime at the field edge with no risk of tipping
ASS 372-1400

Precision unloading for sludge incineration

Teutschental mine

Special feature: Complete disassembly of the vehicle for transport underground (approx. 550 m depth) – ASW 5740
Axle configuration 1 + 3
→ extremely manoeuvrable

* **Observe special care instructions when transporting chemically aggressive materials**

Mining operation
use of 7 vehicles

USE IN QUARRIES, TUNNELS, MINES, DUMPS

Mining operation in Australia

Bernburg salt mine
Underground use of 5 vehicles

ASW Stone Heavy Type 5740/2700

Vehicle for internal use, e.g. major construction sites, surface and underground mining, etc.
Techn. payload of body 30/38 t
(can vary by chassis)

ASW STONE OFFROAD EXTRA STRONG

Heavy-duty mining application
Transport of blasted rock in stone quarry
5-axle truck with over 50 t payload, type 6750-2600

Wir sind Fliegl.

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