100%

BALLAST CLEANERS

MATISA

la passion du rail

BALLAST CLEANERS

C 75
D 75

The road to

100%

success

Unique tailored machines, manufactured just for you

MATISA ballast cleaners are true on-track moving factories for ballast cleaning and renewal work. Their ramp-in, ramp-out as well as output capabilities will amaze you. MATISA commits to:

- Safe operation of its machines
- Optimal cabin design favouring optimum ergonomics
- Fast and efficient tools set-up and fold-up
- Cost effective operation and maintenance

C 75

Compact, fast and cost effective

The MATISA C 75 is a compact, high-output ballast cleaner characterised by very quick and short ramp-in and ramp-out capabilities, enabling its deployment on very short as well as on longer, more complex worksites.

Its efficient guiding system allows excellent work quality, safely using the full working gauge, even during ramp-in phase.
Its dimensions ensure a ballast cleaning output of 750 m^3/h and up to 1000 m^3/h ballast excavation output.

Its size warrants efficient logistic management and stabling possibilities within the worksite vicinity.
The standard component selection eases maintenance activities, reduces costs while ensuring maximal availability. Of robust and flexible build, the working tools of the C 75 ballast cleaner enable worksite optimisation.

1000 m^3/h

D 75

Tailored tools

The MATISA D 75 ballast transfer machine can ideally be used behind a track renewal train where sleepers have been exchanged, enabling track lowering of 50 to 150 mm or more, depending on worksite.

Two atmospheric engines, alternately used, ensure a 100% output and reliability of this machine.

WORKING TOOLS

When engineering targets excellence

Excavation unit

The excavating unit excavates the ballast under the track and conveys it to the deviation chute which transfers it to a main conveyor. The cutter bar position can be hydraulically adjusted to fit the required angle. It is controlled in depth and cant in order to match the various track geometry designs.

Vibrating screen

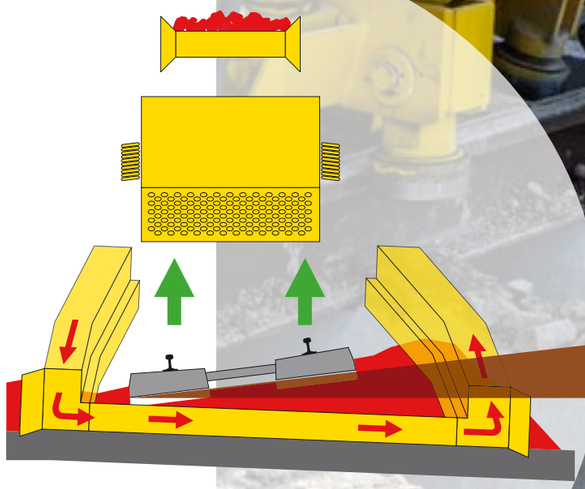
The oscillating screen ensures high-output and excellent screening quality. Its interchangeable three level grids allow adaptation to any ballast grading range. The screen can be stopped rapidly thanks to a high performance electric braking system.

Ballast distribution

At the exit of the screen the clean ballast is carried away by a variable geometry distribution conveyor, to finally be discharged in front of the re-ballasting plough.
The re-ballasting plough forms a single unit with the rear clamp. This ensures the correct positioning of the track by following the guidance system instructions, minimizing other machines' interventions before the track is released. The setting of the lateral blades enables to adapt ballast distribution in line with the worksites requirements.

Horizontalisation

The angle of the cutter bar can be adapted up to a 10% cant through its two electric pendulums fitted on the front and central bogies.

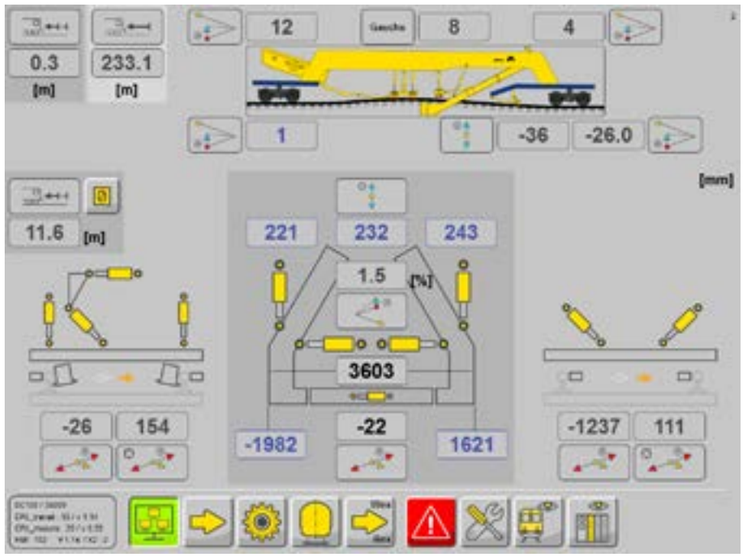


MEASURING AND GUIDANCE

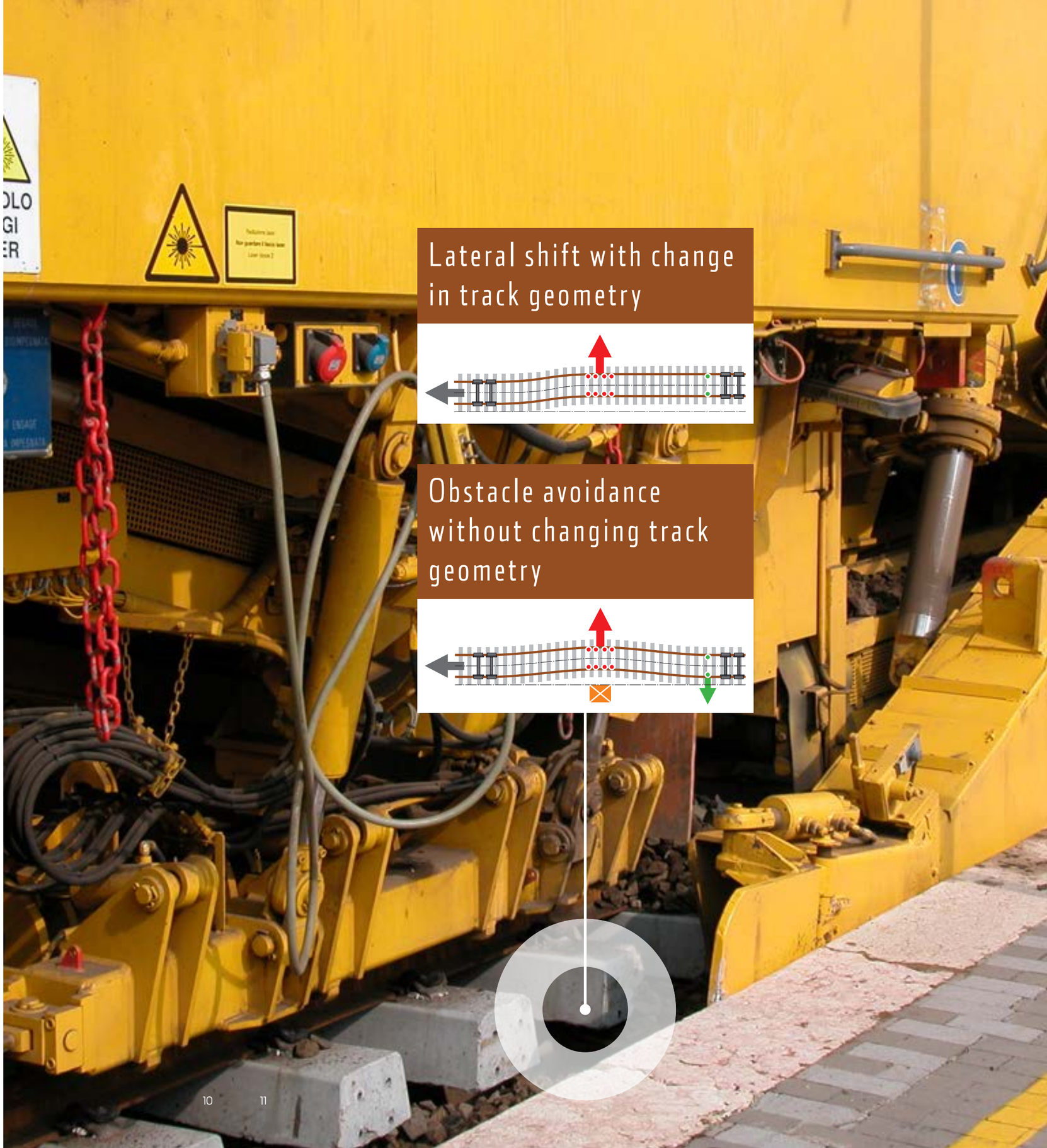
Quality and precision

The MATISA C 75 ballast cleaner is equipped with a powerful CATT guiding computer fed by a three point A, B and C measuring base and four pendulums. This enables to accurately manage track geometry on the track lowering process.

Based on a given geometry, the guiding computer controls the position of the machine's working units. The operator can input set points or position the units manually at any time.



Example of HMI screen (Human Machine Interface)



FOR OUR WHOLE RANGE OF BALLAST CLEANERS

An agreeable and user-friendly working space

Everything on board has been designed for efficient working and driving: perfect view over working tools, ergonomic control panels with clear displays allowing functions checks and key indicators at a glance.

Additional viewing

Thanks to the cameras, no more blind spots and excellent overview of the working tools. Safety is therefore increased and risk of potential damage is limited.

Everything at your fingertips

The cabin is designed to offer perfect ergonomics. This enables the operator to have easy access to all commands and panels within reach of his sitting position, ensuring safe and performant operation throughout the worksite.

FOR OUR WHOLE RANGE OF BALLAST CLEANERS

Exceptional accessibility, limited immobilisation

Access to the engine compartment is eased through removable panels facilitating maintenance work.

Maximum operation for a minimum maintenance time

Emergency group

The emergency group is independent to the diesel engine and consists of:

- Generator set
- Motor-pump set
- Air compressor

This emergency group enables the folding up of the machine in case of major engine breakdown but can also be used as a power source for small maintenance work.

Technical features

Standard equipment	C 75	D 75
Frame on two bogies	–	•
Frame on three bogies	•	–
UIC continuous and automatic brake	•	•
Parking brake	•	•
UIC couplings	•	•
CATERPILLAR® engine	•	–
DEUTZ® engine	–	•
Hydrostatic drive circuit	•	•
Hydraulic working circuit	•	•
Pneumatic and direct brake circuit	•	•
24 V DC electrical circuit	•	•
Air conditioned working cabins	•	•
Touchscreen human machine interface	•	•
CATT guiding computer	•	–
Working lights	•	•
Power group fire detection	•	•
Ballast excavation	•	•
Ballast screening	•	–

Additional equipment	C 75	D 75
One axle trailer	x	–
Two axles trailer (Auxiliary wagon)	x	–
Additional driven axle	x	–
Auxilliary group 400 V AC	x	–
Workshop compartment on trailer	x	–
Front and rear driving cabin	x	–
Ballast plough	x	x
Ballast compaction device	x	–
Hydro-electric emergency pack-up equipment	x	x
Additional screen	(x)	–
Narrow ballast excavating unit	x	x
Central corridor setting up system	(x)	x
Water spraying system	x	–
Geotextile laying system	x	–
Dual gauge kit or preparation	x	–
Gauge monitoring device	x	x
Adjacent track distance measurement device	x	x
Air-conditioned driving cabin	x	–

Technical data	C 75	D 75
Kinematic gauge	UIC 505-1	UIC 505-1/ W6A
Track gauge	1,435–1,676 mm	1,435 mm
Minimum radius in working mode	250 m	250 m
Minimum radius in convoy	150 m	150 m
Travelling speed in driving mode	80 km/h optional	–
Travelling speed in convoy	100 km/h	100 km/h
Wheelbase	20,000/7,440 mm	19,300 mm
Bogie wheelbase	1,800 mm	1,800 mm
Number of bogies	3	2
Wheel diameter	920 mm	920 mm
Total weight	120 t	80 t
Power capacity (2 alternate engines)	700 kw	400 kw
Driven axles in working mode	6	4
Heading face		
Width (variable depending on chosen cutter bar)	3,650 – 5,500 mm	Min. 3,570 mm
Width variation (hydraulic)	500 mm	-
Width of ascending trough	540 mm	410 mm
Width of descending trough	450 mm	410 mm
Sleeper spacing – excavation bottom	300 mm	300 mm
Excavating depth from the running surface	1,000 mm	800 mm
Free oscilliation screen		
Useful area	32 m²	–
Amplitude	18 m²	–
Frequency	16 Hz	–
Other data		
Max. horizontalisation	10%	–
Max. track lifting	270 mm	270 mm
Max. track slewing	+/- 400 mm	+/- 400 mm
Max. clamp slewing	+/- 220 mm	+/- 220 mm

Legend: ● basic | **x** optional | **–** not available

The road to 100% success

Subsidiaries and a network of agents

100%

at your service

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