

B038A
SMARTRACKER™

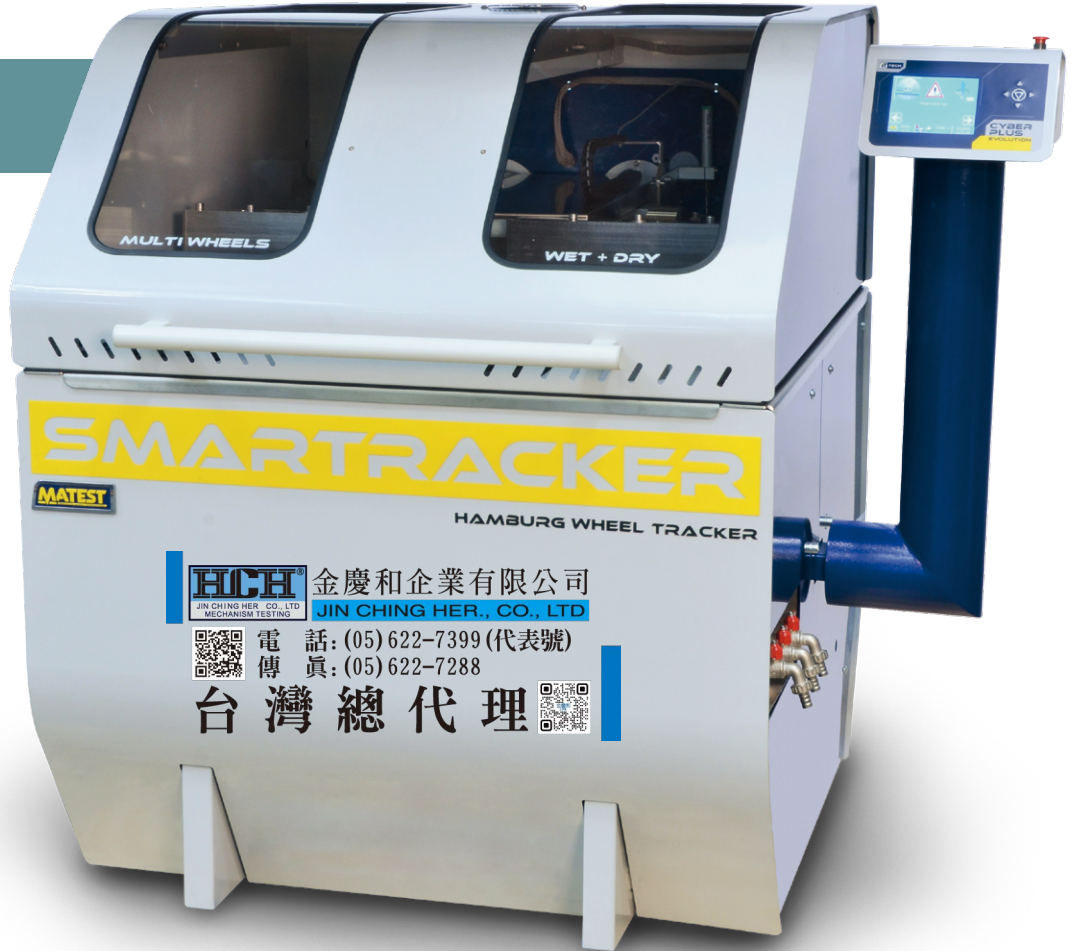
MULTI WHEELS HAMBURG WHEEL TRACKER; TEST ENVIRONMENT: DRY+WET

STANDARDS: EN 12697-22 | AASHTO T-324

PATENT No: US 9, 964, 471



PATENTED



B038A

THE N° 1 UNIT IN U.S. MARKET

MAIN FEATURES

- Meets and exceeds AASHTO and EN Standards.
- Simultaneous testing of wet and dry samples.
- Independent motors for each wheel assure separate rutting analysis of each specimen.
- High performance components.
- No lifting of heavy wheel assemblies. Wheels retract automatically.
- Sturdy machine, designed for the rugged construction laboratory environment.
- Sliding sample positioning mechanism for easy mould handling and placement in the machine.
- Does not require lifting of heavy wheel components.
- Fully Automatic machine. Detects and stops the test when the target rut depth is reached.
- Touch-screen control unit for user friendly execution of the test, management of the data and visualization of the results.
- Each of the two wheel assemblies is equipped with displacement transducers for rut measurement.
- Mechanical recirculating water bath for temperature control within ± 1 °C.
- Easy to load, unload, drain water and clean the unit after each test.
- Small footprint to accommodate small construction labs.
- Covered by US Patent.

B038A SMARTRACKER™

MULTI WHEELS HAMBURG WHEEL TRACKER - **PATENTED**

STANDARDS: EN 12697-22 | AASHTO T-324

The Hamburg wheel tracking device can be used to determine the resistance of Hot Mix Asphalt (HMA) to rutting and moisture sensitivity. Matest model "SmarTracker™" meets and exceeds EN and AASHTO.

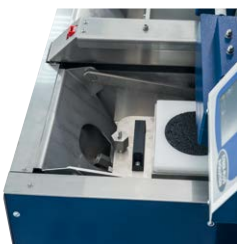
It is intelligently designed with innovative features and the needs of the end users in mind.

The most versatile wheel tracker on the market has independent motors for each wheel which assure separate rutting analysis of each specimen.

Now you can perform wet or dry test with both wheels or run one wheel under dry and one wheel under wet condition simultaneously during a single test.

Determine the creep slope, stripping inflection point and stripping slope with this state of the art and user friendly machine.

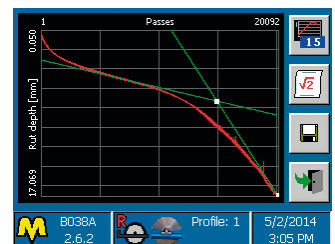
MATEST SmarTracker™ has been developed by our R&D engineers and scientific in association with some of the most experienced and reputable industry experts in the USA and the world.



Unique system to
Load-unload the mould



Innovative wheels roll off Mechanism
(patented)



Real time results plot of the rut
depth along with the no. of passes.

TECHNICAL SPECIFICATIONS

- Wheel load: 705 N
 - Wheel speed: from 20 to 30 cycles/minute.
 - Temperature control:
EN 12697-22: 2500W heaters for air temperature control, ventilation for temperature uniformity, probe for air temperature, all controlled by the electronic system.
AASHTO T324: 4000W heaters, recirculating pump, automatic feed and controls level.
 - Temperature control range: from ambient up to 75±1 °C
 - Table travel: 230 mm
 - Rut depth transducers range: 25 mm ± 0.1 mm accuracy.
 - Slab thickness: adjustable from 38 to 120 mm
- Power supply:** 220V 50-60Hz
Dimensions: 1400x1300x1300 mm
Weight: 450 kg approx.

MAIN FEATURES

- No added stress to operators back from lifting heavy wheel assemblies.
- Sample holders slide into position and eliminate demanding lifting and placement of samples into the unit.
- Hood keeps technicians away from moving parts and provides better temperature control while the test is being conducted.

B038A-15 SMARTTRACKER HAMBURG VERSION AASHTO T324 (WATER TEST ONLY)

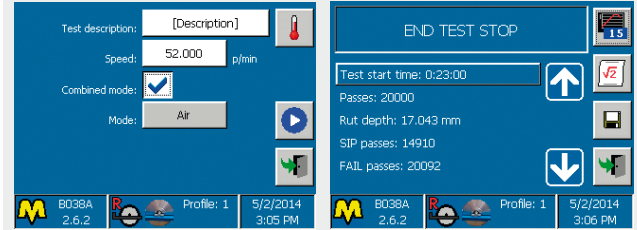
STANDARDS: AASHTO T324, AMAAC Mex Protocol
Same as model B038A but without cover, it allows water test only.



B038A-15

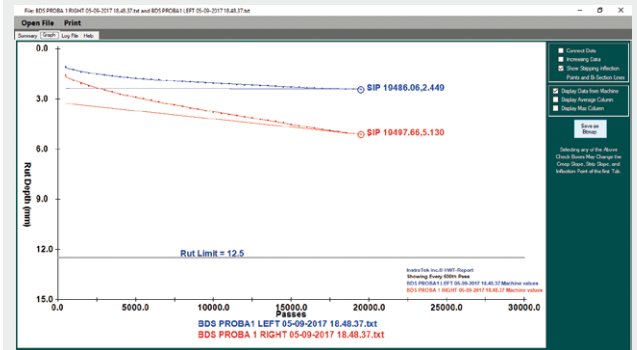
TESTING SOFTWARE

The user-friendly software is integrated into the on-board digital control unit based on Windows operating system. The software is fully customizable by the operator according to EN and AASHTO Standards, and the personal needs. Automatic calculation of stripping inflection point (AASHTO). Test execution and all parameters, such as water/air temperature, specimen temperature, rut depth can be monitored in real time. The software also allows exporting test data to an Excel compatible format.



B038A-16 SOFTWARE HWT-REPORT TO AASHTO T324

The Unique HWT-Report software allows the user to analyze the results from the SmarTracker to generate a report and a graph strictly conforming to AASHTO T324. The features of the software include the ability to analyze different locations along the wheel pass, graph maximum and average rut depths, stripping inflection point and detailed reports (selecting all the wheel passes or different sampling rates) that can be presented, printed or emailed.



HWT-Report AASHTO T324

Project Name	Lab	Lab Ref	Lab Temp	Right Pass	Right Temp	Difference
Technician: [Name]	450	129	62.3	620	174	62.2
Date Tested: 05/09/2017 (Left) and 05/09/2017 (Right)	600	129	59.9	1000	189	59.9
Testers: Prof Messer (RWS), Dr. Loh and Dr. Ploger	900	130	60.2	1500	200	60.2
Water Temperature: 60.0 °C (Left) and 60.0 °C (Right)	2000	147	60.2	2000	210	60.2
Sample Identification	3000	150	60	2500	210	60
Thickness (mm)	4000	158	60.2	3000	247	60.2
% Air Moisture	5000	164	59.9	3500	259	59.9
Final Rut Depth	6000	169	60.1	4000	270	60.1
Target Passes to Failure	7000	170	60.2	4500	278	60.2
Final Passes to Failure	8000	175	60	5000	283	60
Striping Slope	9000	179	60.1	5500	289	60.1
Stripping Inflection Point	10000	180	60	6000	297	60
Striping Pass/Fail	11000	185	60.1	6500	317	60.1
Striping Slope	12000	188	60.3	7000	327	60.3
Striping Inflection Point	13000	193	60	7500	339	60
Striping Pass/Fail	14000	195	60	8000	344	60
Striping Slope	15000	197	60	8500	349	60
Striping Inflection Point	16000	200	60.2	9000	357	60.2
Striping Pass/Fail	17000	205	60.1	10000	370	60.1
Striping Slope	18000	205	59.9	10500	375	59.9
Striping Inflection Point	19000	209	60.2	11000	387	60.2
Striping Pass/Fail	20000	211	60.1	11500	393	60.1
Striping Slope	21000	211	60	12000	399	60
Striping Inflection Point	22000	214	60	12500	406	60
Striping Pass/Fail	23000	217	60	13000	413	60



TABLE OF ACCESSORIES TO PERFORM DRY (AIR) AND WET (WATER) TEST FOLLOWING EN 12697-22 AND AASHTO T324 SPECIFICATIONS

Standards	EN 12697-22		AASHTO T324	
Testing mode	Dry (air)	Wet (water)	Wet (water)	* Dry (air)
	2x B038A-01 Rubber wheel	2x B038A-01 Rubber wheel	2x B038A-02 Steel wheel	2x B038A-02 Steel wheel
	2x B038A-11 EN Mould	2x B038A-11 EN Mould	2x B038A-06 Probe (optional)	2x B038A-10 or 2x B038A-11 Mould
	B038A-12 B038A-13 Adaptors	B038A-12 B038A-13 Adaptors	FOR CYLINDRICAL SPECIMENS: 2x B038A-10 AASHTO Mould	2x B038A-03 Tool
	B038A-05 Air heating	B038A-06 Probe (optional)	2x B038A-03 Tool	B038A-12 + B038A-13 Adaptors
	2x B038A-06 Probe (optional)		B038A-10D Adaptors	B038A-05 Air heating
			FOR SLAB SPECIMENS: 2x B038A-11 Mould	2x B038A-06 Probe (optional)
			B038A-12+B038A-13 Adaptors	

B038A-01

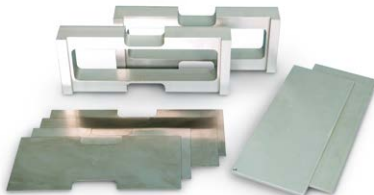
Rubber wheel for EN 12697-22



B038A-11 EN mould



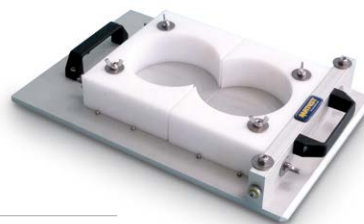
Note: *AASHTO T324 does not require air test.



B038A-13 Horizontal adaptors for EN moulds



B038A-02
Steel wheel for AASHTO T324



B038A-10
AASHTO mould

NEEDED ACCESSORIES

EN 12697-22

- B038A-01** RUBBER WHEEL 203x50 mm
- B038A-11** EN MOULD 400x305x120 mm
- B038A-12** SET OF VERTICAL ADAPTORS for EN mould to allow the positioning of specimens lower than 120 mm (up to a minimum specimen thickness of 20 mm)
- B038A-13** SET OF HORIZONTAL ADAPTORS for EN mould to allow the positioning of specimens 260x320 mm and 305x305 mm

AASHTO T324

- B038A-02** STEEL WHEEL 203x47 mm
- B038A-10** AASHTO MOULD (2 cylinders Ø 150x60 mm)
- B038A-03** TOOL for AASHTO positioning
- or
- B038A-07** STAINLESS STEEL TOOL for AASHTO positioning
- B038A-10D** VERTICAL ADAPTORS for AASHTO mould to allow the positioning of specimens with a thickness of 40 mm



B038A-14

OPTIONAL ACCESSORIES

- B038A-04** ELECTROVALVE group for hot water
- B038A-05** AIR HEATING SYSTEM for air conditioning test EN 12697 -22
- B038A-06** PROBE for specimen's temperature determination
- B038A-09** HPDE mould specimen holder.
- B038A-14** VERIFICATION KIT for the calibration of the wheel load. The calibration kit is designed to facilitate the calibration or to check the machine's wheel load. The device is composed of a support block with a calibrated load cell and complete with a digital readout. Max. load 1000 N, accuracy 0.05%.