

QUALITEST
ADVANCED TESTING TECHNOLOGIES



Member of
**(WORLD
of TEST)**

[WORLD of TEST.com](http://WORLDofTEST.com)

QUALITEST™

AUTOMATIC MORTAR MIXER



STANDARDS

AASHTO T162

ASTM C305

DIN 1164

EN 196

Introduction to Automatic Mortar Mixers

Automatic mortar mixers are advanced devices designed for the efficient and consistent mixing of cement, mortar, and similar construction materials. These mixers automate the preparation process, ensuring uniformity and compliance with stringent industry standards. Widely used in construction material testing, research, and quality control laboratories, automatic mortar mixers are essential for achieving reliable results in material performance assessments.

Qualitest offers a top-quality, competitively priced range of automatic mortar mixers tailored to meet and exceed international standards such as ASTM C305 and EN 196-1. These standards define the requirements for mixing efficiency, specifying differences in paddle and bowl sizes to suit varying material quantities and testing conditions. For instance, ASTM C305 emphasizes the preparation of pastes and mortars using specific dimensions for paddles and bowls to replicate standardized conditions, while EN 196-1 provides guidelines for testing cement strength with equally precise specifications.

Qualitest's range of mortar mixers includes models with additional functionalities like automatic sand and water mixing, reducing operator involvement and enhancing consistency. These versatile mixers are ideal for laboratories and testing facilities focused on developing and analyzing high-performance construction materials.

Automatic Mortar Mixer Systems

Automatic Mortar Mixer systems help cement and mortar labs standardize batch prep for QC and R&D. Automated feeding and controlled mixing reduce operator variability, improving repeatability across strength and admixture tests. Use the table

below to compare the best option for your lab.

Technical Parameter	ASTM C305 - Sand & Water / Admixing - 4.73 L	ASTM C305 - Sand Feeding Device - 4.73 L	EN 196 - Sand Feeding Device - 5 L	QMix	EN 196 - 5 L - Light Version
Standard / Method	ASTM C305	ASTM C305 (programs also list ASTM C451 + C305 paste)	EN 196	EN 196-1, EN 196-3, EN 480-1	EN 196
Bowl Capacity	4.73 L	4.73 L	5 L	5 L	5 L
Control & Automation	Automatic program (manual operation also stated)	Stored mixing programs (P1-P4)	Manual control	Manual + automatic modes; intelligent control	Manual control
Feeding / Dosing	Auto sand feed + water dosing; cement manual	Sand feeding device (water dosing not stated)	Sand inlet manually controlled; cement + water manual	Automated feeding system (hopper/stepper-based)	Cement + water + sand manual

Explore our range of cement mixers and experience the reliability and precision required to meet the demands of modern construction testing.

THEORY & METHOD

Planetary Kinematics & Bowl Dynamics

Getting a beautifully consistent, silky-smooth paste is an absolute must for highly dependable, perfectly repeatable material testing, and trading up to a top-tier Automatic Mortar Mixer from Qualitest leaves outdated, manual hand-mixing completely in the dust. The physical forces that make this equipment, such as the Automatic Mortar Mixer ASTM C305 (4.73 Liters), highly effective rely on precise calculations of material movement and planetary motion logic.

Paddle & Bowl Interaction

Rather than guessing how the mixing paddle slashes through the wet mixture, engineers map out the exact path of individual sand particles as they roll and slide. By measuring the mechanical effort of the entire testing setup, developers ensure that the sweeping curves of the paddle and the inner stainless-steel walls of the 4.73 L or 5 L bowls work together flawlessly. This squeezes out the absolute most blending action possible while adhering strictly to standard testing guidelines like DIN 1164 or AASHTO T162.

Minimized Mixing Cycles

To prevent lost productivity in a highly active laboratory environment, engineers use strict comparison rules that track exactly how liquid chemically reacts with the cement dust. This process pinpoints the absolute shortest spinning time required, yielding an incredibly uniform, clump-free blend without wasting valuable work hours.

Automated Process Controls

The primary advantage of a modern planetary Automatic Mortar Mixer, such as the highly advanced QMix variant, is its capacity to handle the annoying, repetitive monitoring tasks automatically, completely removing human slip-ups to deliver shockingly consistent testing results. Moving far beyond manual guesswork, integrating automated features ensures your material evaluation is impressively efficient and perfectly repeatable.

PLC Automation

These systems use clever integrated microprocessors to manage the material recipe and run strictly stored mixing programs (like P1-P4 for specific pastes) automatically. This maintains incredibly tight batch accuracy and prevents extremely expensive material waste.

Automated Material Dosing

Models equipped with an automated sand feeding device and direct liquid dosing take the messy, hands-on pouring out of the equation. The system feeds the exact required amount of sand through a specialized hopper-based feeding mechanism directly into the bowl, making long, non-stop testing jobs a total breeze while strictly following EN 196 and ASTM C305 standard methods.

Magnetic & Mechanical Locking

Ensuring the heavy stainless-steel bowl stays completely firmly attached during high-speed planetary rotation is critical for laboratory safety and batch consistency. An incredibly secure magnetic bowl locking mechanism, or the specialized, user-friendly lowering mechanism found on the Mortar Mixer EN 196 - 5 Liters - Light Version, keeps the container totally rigid, preventing unwanted rattling that could alter the physical properties of the wet slop.

Mixing Sequences & Material Strength

How you choose to operate your programmable Automatic Mortar Mixer and the exact length of the programmed mixing cycle directly influence how the freshly spun paste behaves and how incredibly tough the final hardened block becomes.

Fresh vs. Hardened Properties

Critical physical qualities, including how light and airy the wet paste feels, how much liquid the dry specimen drinks up, and how the tiny, microscopic structures lock together, are decided entirely by the planetary style of mixing and the cycle duration.

Staged Phase Additions

For heavily clay-rich cements, programming the machine to add your liquid or sand in completely separate, strictly timed stages rather than dumping it all at once significantly changes the glue-like stickiness of the paste. This programmed sequence helps reinforcing materials spread out beautifully throughout the mix, resulting in a much tougher dry specimen without relying on extra liquid.



ADVANCED TESTING TECHNOLOGIES

USA | CANADA | UAE | GCC | EU | INDIA | APAC | AFRICA | LATIN AMERICA

Connect with us

Contact our **QualiTeam** today to find out how we can help your organization **select the most suitable testing solution** for your application, requirements, and budget.

Qualitest USA (Corporate Sales Office)

Toll-Free: 1.877.884.TEST (8378) | Fax: 954.697.8211
E-mail: info@qualitest-inc.com
Address: 8201 Peters Rd., #1000,
Plantation, FL 33324, USA.

Qualitest Canada & International

Tel: +1.905.944.9825 | Fax: +1.905.944.0304
E-mail: sales@qualitest-inc.com
Address: 70 East Beaver Creek Rd., #9, Richmond Hill,
Ontario L4B 3B2, Canada.

Qualitest Latin America (Mexico and LATAM Region)

E-mail: ventas@qualitest-inc.com

Qualitest KSA (Regional Office)

Tel: +966 11 500 6659
Address: Level 7, 3.09, District 3, King Abdullah
Financial District, Riyadh, Saudi Arabia

Qualitest Singapore (ASIA PACIFIC Regional Office)

Tel: +65 6393 5480 | E-mail: singapore@qualitest-inc.com
Address: 50 Raffles Place, Singapore Land Tower,
Level 46, Singapore, 048623.

Qualitest Indonesia (Representative Office)

Tel: +62 21 2985 9522 | Fax: +62 21 2985 9889
E-mail: indonesia@qualitest-inc.com
Address: One Pacific Place Level 11, Jl. Jend. Sudirman,
Kav. 52-53, SCBD Area, Jakarta 12190, Indonesia.

Qualitest FZE (Regional GCC/ME Office)

Tel: +971 4 8819252 | Fax: +971 4 8819262
Email: gcc@qualitest-inc.com
Address: Jafza One, BB 1610, Jebel Ali Free Zone,
PO Box 261440, Dubai, UAE.

Qualitest India

E-mail: india@qualitest-inc.com
Address: 15th Floor, Dev Corpora, Pokhran Road No.1,
Eastern Express Highway, Thane, Maharashtra,
Mumbai, 400601, India

