

1. PRODUCT OVERVIEW & ENGINEERING DESCRIPTION

The **TAT QCA Series** represents a premium line of false-ceiling, hidden ducted centrifugal exhaust fans engineered specifically for residential, commercial, and institutional mechanical ventilation systems across the Middle East. Featuring a robust chassis configuration, the QCA series effectively overcomes static pressure limitations associated with extended flexible duct runs.

Its ultra-low profile footprint enables direct installation within restricted ceiling spaces, aligning perfectly with modern gypsum board setups or standard 60x60 structural ceiling tile configurations across premium Gulf developments.

2. CONSTRUCTION & MATERIAL SPECIFICATIONS

Mechanical Framework

- **Chassis Housing:** High-gauge, premium multi-layered galvanized iron sheet designed to prevent structural distortion and resonance.
- **Anti-Corrosion Treatment:** Finished with a heavy anti-rust zinc barrier ideal for high-humidity environments (bathrooms, commercial pantries, laundry suites).
- **External Face Grille:** Removable, high-impact UV-stabilized architectural white PVC louvre panel engineered for minimal static drag and easy maintenance.
- **Backdraft Protection:** Features an integrated, spring-assisted double-blade butterfly shutter built directly into the discharge spigot connection to isolate external wind pressure, insect ingress, and odor backflow.

3. ELECTRICAL & MOTOR DATA

Motor Architecture

- **Stator Core:** 100% Pure electromagnetic high-grade copper windings.
- **Bearing Assembly:** Dual-shielded, pre-lubricated high-density steel ball bearings optimized for continuous-duty operation.
- **Safety Core:** Integrated auto-reset Thermal Overload Cutout (TCO) protecting against voltage spikes and localized phase failures.
- **Grid Compliance:** Rated explicitly for GCC networks (220V–240V AC, 50Hz single-phase configuration).

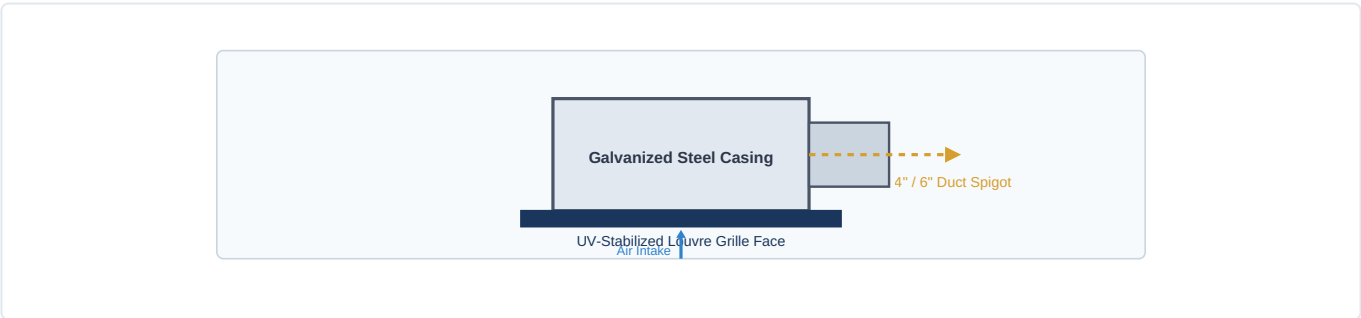
4. PERFORMANCE METRICS & PRODUCT LINE-UP MATRIX

The following metrics indicate calibrated parameters tested at standard static operating limits:

MODEL REF.	FACE PANEL SIZE	CEILING CUT-OUT	DUCT CONNECTION	INPUT POWER	SUCTION CAPACITY	PRIMARY APPLICATION PROFILE
TAT-50QCA	170 x 170 mm	145 x 145 mm	4" (100 mm)	20 Watts	50 CFM / 85 m³/hr	Residential guest bathrooms, utility closets

MODEL REF.	FACE PANEL SIZE	CEILING CUT-OUT	DUCT CONNECTION	INPUT POWER	SUCTION CAPACITY	PRIMARY APPLICATION PROFILE
TAT-80QCA	240 x 240 mm	210 x 210 mm	4" (100 mm)	25 Watts	80 CFM / 136 m³/hr	Standard residential bathrooms, en-suites
TAT-120QCA	240 x 240 mm	210 x 210 mm	4" (100 mm)	29 Watts	120 CFM / 204 m³/hr	Master bathrooms, high-moisture shower suites
TAT-160QCA	300 x 300 mm	260 x 260 mm	6" (150 mm)	35 Watts	160 CFM / 272 m³/hr	Commercial office rest stalls, server closets
TAT-300QCA	320 x 320 mm	290 x 290 mm	6" (150 mm)	52 Watts	300 CFM / 510 m³/hr	High static multi-branch commercial zones

5. BASIC MECHANICAL LAYOUT SCHEMATIC



Material Submittal Verification Note:
 This technical datasheet aggregates compiled engineering parameters verified against official distribution records, primary Gulf regional supply networks, and project submittal files from authorized distribution nodes.

Sourcing Master Queries & Reference Channels:

- Al-Hakbani Trading Group Technical Portal: Verification Node (Ref: FGQCA-Series)
- El-Buroj Supply Networks: Industrial Procurement Catalogs
- Trendyol Regional Logistics: Verified Stocking Profiles