THE INTELLIGENCE
TOMIGUNN AI
ENVIRONMENTAL CONTROL

ENGINEERED FOR
PERFORMANCE & SCALE

TOMIGUNN
AI-POWERED. PRECISION-BUILT. NATURALLY INTELLIGENT.

The TOMIGUNN enclosed house is a patent-pending, fully sealed structure that cuts exterior wall area by 40% versus conventional designs, allowing superior insulation at similar cost, reduced thermal conductivity, and excellent pest exclusion while keeping equivalent floor space and standard stocking densities.

Its ventilation exploits a raised central roof section for chimney-effect gas exchange, paired with high-efficiency direct-drive fans with patented blades, AI-actuated louvers, MERV 13 plasma filtration at every inlet, and external high-pressure 15-micron misting using RO water and UV disinfection—delivering cleaner, more efficient cooling than traditional evaporative pads.

A comprehensive multi-level sensor network tracks temperature, humidity, CO_2, O_2, and ammonia, fusing real-time NOAA weather, local conditions, genetics, and age data to power true AI optimization algorithms that dynamically modulate airflow, temperature, water, feed, and lighting for exceptional uniformity, energy savings, and rapid adaptation to changes—surpassing the static performance of rigid tunnel-ventilated houses.

This self-learning AI control markedly improves animal health, biosecurity, and efficiency in varied climates, outclassing fixed-rule tunnel systems reliant on high-velocity unidirectional flow and contamination-prone cooling media with minimal real-time flexibility.

The TOMIGUNN AI system continuously analyzes and predicts conditions using multiple data sets operating simultaneously:

REAL-TIME INPUTS:
- Temperature, humidity, airflow
- Ammonia, CO2, oxygen
- Infrared animal & litter temperature
- Water quality and flow
- Feed intake and bin levels

ADVANCED DATA SOURCES:
- On-site weather stations
- NOAA & forecast modeling
- OCR-scanned livestock delivery tickets
- OCR-scanned feed delivery tickets
- Optional genetics-aware optimization

WHAT AI CONTROLS:
- Fan speed, direction, and staging
- Louver position and timing
- Misting activation and duration
- Jet ventilation and ammonia harvesting
- Heating + ventilation balance in cold weather
- The system predicts what the environment will be — not just what it is.

- Uniform environmental conditions
- Reduced energy consumption
- Improved feed conversion and livability
- Lower ammonia exposure
- Chemical-free water treatment
- Future-ready, modular expansion

APPLICATIONS:
- Poultry
- Swine
- Dairy & cattle
- Other controlled agricultural environments

UNMATCHED BIOSECURITY:

The TOMIGUNN house far surpasses conventional enclosed housing in biosecurity through its sealed near-square design with ~40% less wall exposure, MERV 13 filtration on all inlets, external RO/UV-treated high-pressure misting to block contaminants, and AI real-time infrared plus multi-gas sensors that proactively neutralize threats before entry or spread.

DESIGNED BY TOMIGUNN. MANUFACTURED BY QUICKEN STEEL.
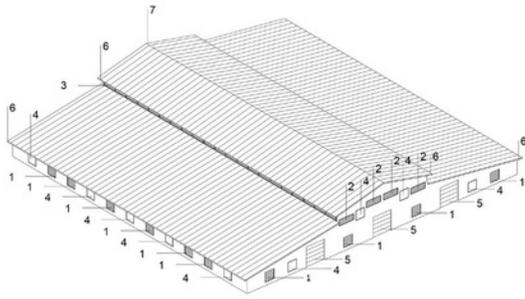
PERSPECTIVE VIEW

Modern livestock production demands more than fans and timers.

TOMIGUNN'S REVOLUTIONARY AI-ENABLED HOUSING SOLUTIONS ARE THE ANSWER TO WHAT TRADITIONAL SYSTEMS STRUGGLE WITH:

- Uneven airflow and temperature stratification
- Excess ammonia and poor air quality
- High energy consumption
- Reactive (not predictive) environmental control
- Rising welfare, sustainability, and efficiency requirements

The TOMIGUNN houses deliver enhanced animal performance, reduced mortality, and superior energy efficiency by maintaining consistently optimal environments that promote healthier livestock and more predictable, profitable outcomes.
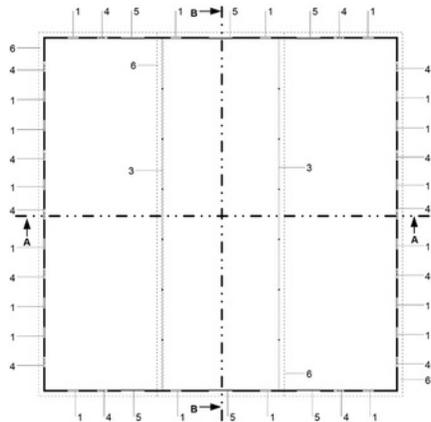
FLOOR PLAN VIEW

INTRODUCING AI-POWERED
ENCLOSED AGRICULTURAL HOUSING

This is not a building with automation added later. It is an intelligent system from day one.

CORE DESIGN PRINCIPLES:

- Square / near-square footprint (up to 200' × 200')
- Reduces exterior wall exposure by 40%
- Fully symmetrical perimeter ventilation
- Centrally elevated roof for natural exhaust
- External air pre-conditioning before air enters the building
- Predictive AI control instead of mechanical reaction

TOP THREE REASONS TO BUILD:

1. Massive Energy and Cost Savings
2. Superior Animal Health and Performance
3. Hands-Off Automation and Remote Management

HOW IT WORKS
A BUILD THAT BREATHES

SYMMETRICAL DYNAMIC VENTILATION:

- AI-actuated louvered inlets around the perimeter
- Infinitely variable EC fans (0–100% PWM)
- Multi-directional airflow and precise pressure control

BERNOULLI-ASSISTED ROOF EXHAUST:

- Center one-third of the roof elevated 4 feet
- Adjustable ridge louvers on opposing sides
- Hot, buoyant, ammonia-laden air rises naturally and exits efficiently

EXTERNAL AIR PRE-CONDITIONING:

- High-pressure micro-mist cooling (50-micron @ 60 bar)
- Reverse-osmosis filtered water
- Ultra-fast evaporation (18 inches)
- Cooling occurs before air enters, preventing wet litter

25.8°C