**Algobot**
*Maximize Your Profits*

# Expanding Thrust Runner

Expert Advisor Documentation

| PLATFORM | TYPE | TIMEFRAME | WEBSITE |
|---|---|---|---|
| MetaTrader 5 (MT5) | Momentum Continuation (Price Action) | H1 (works on M15–H4) | www.algobot.live |

⚠ **Important Disclaimer** This document is for educational and informational purposes only. It does not constitute financial or investment advice. Trading forex, CFDs, and other leveraged instruments involves substantial risk of loss and is not suitable for all investors. Past backtest performance does not guarantee future results. Never trade with capital you cannot afford to lose.

## Overview

**Expanding Thrust Runner** is a pure price-action momentum-continuation Expert Advisor. It uses **no indicators whatsoever** — every decision is computed directly from raw OHLC bars. Rather than waiting for a pullback before entering, the EA is built on a single conviction: genuine momentum reveals itself as *acceleration*, not merely direction. It therefore tries to join a move *while it is still expanding*.

The strategy hunts for a short run of same-direction candles in which three independent pressure signatures line up at the same moment on the just-closed bar:

- **Closing pressure** — every candle in the run closes in the extreme portion of its own range, showing buyers (or sellers) in control into each close.
- **Structure** — the run forms strictly sequential higher-highs (for longs) or lower-lows (for shorts).
- **Expansion** — the run is accelerating (the freshest candle is at least as large as the run's first candle) and the run's net travel is large relative to the recent average candle range.

When all three conditions align, the move is presumed to keep running and a market order is placed with a swing-anchored stop loss and an R-multiple take-profit. The long and short rules are fully distinct, only one position is held at a time, and the trade is managed entirely by its stop loss and take profit — there is no discretionary or trailing exit.

## How It Works

### Decision Cadence

The EA evaluates its rules **once per newly-closed bar**. The bar at shift `0` is the still-forming candle; when its open-time advances, the candle at shift `1` has just closed and becomes the freshest bar in the analysis. This avoids acting on incomplete, repainting price data.

### Pre-conditions

- Only **one position at a time** per magic number is allowed — if a position is already open, the EA does nothing and lets the SL/TP run.
- Enough history must exist: `ThrustBars + RangeWindow + 2` bars are required before any signal is considered.

### The Yardstick — Average Candle Range

Before measuring the thrust, the EA computes the average candle range (High − Low) over `RangeWindow` bars positioned *behind* the run (starting at shift `ThrustBars + 1`). This average becomes the benchmark against which the run's net travel is judged, so the same logic adapts to quiet and volatile conditions alike.

### Entry Logic — Long Continuation

The run spans shift `1` (newest closed) back to shift `ThrustBars` (oldest in the run). A **long** is taken when all of the following are true on the just-closed bar:

1. **Closing pressure:** every run candle is bullish (`Close > Open`) and closes at least `ClosePosMin` of the way up its range, where `(Close − Low) / (High − Low)` measures how close to the high it finished.
2. **Structure:** the run prints strictly higher highs from one candle to the next.
3. **Expansion:** the newest candle's range is at least as large as the oldest candle's range (the move is accelerating, not fading).
4. **Net travel:** the run's net travel, `newest.Close − oldest.Open`, is at least `MinThrustMult × avgRange`.

When confirmed, a market **Buy** is sent at the Ask. The stop loss is placed at the run's lowest low minus a buffer of `StopBufferFrac × newestRange`; the take profit is set at `entry + RewardRisk × risk`, where `risk = entry − SL`.

### Entry Logic — Short Continuation

The short rule is the mirror image. A **short** is taken when every run candle is bearish and closes near its low (by `ClosePosMin`), the run prints strictly lower lows, the run is expanding, and the downward net travel `oldest.Open − newest.Close` meets `MinThrustMult × avgRange`. A market **Sell** is sent at the Bid; the stop loss sits at the run's highest high plus the buffer, and the take profit at `entry − RewardRisk × risk`, where `risk = SL − entry`.

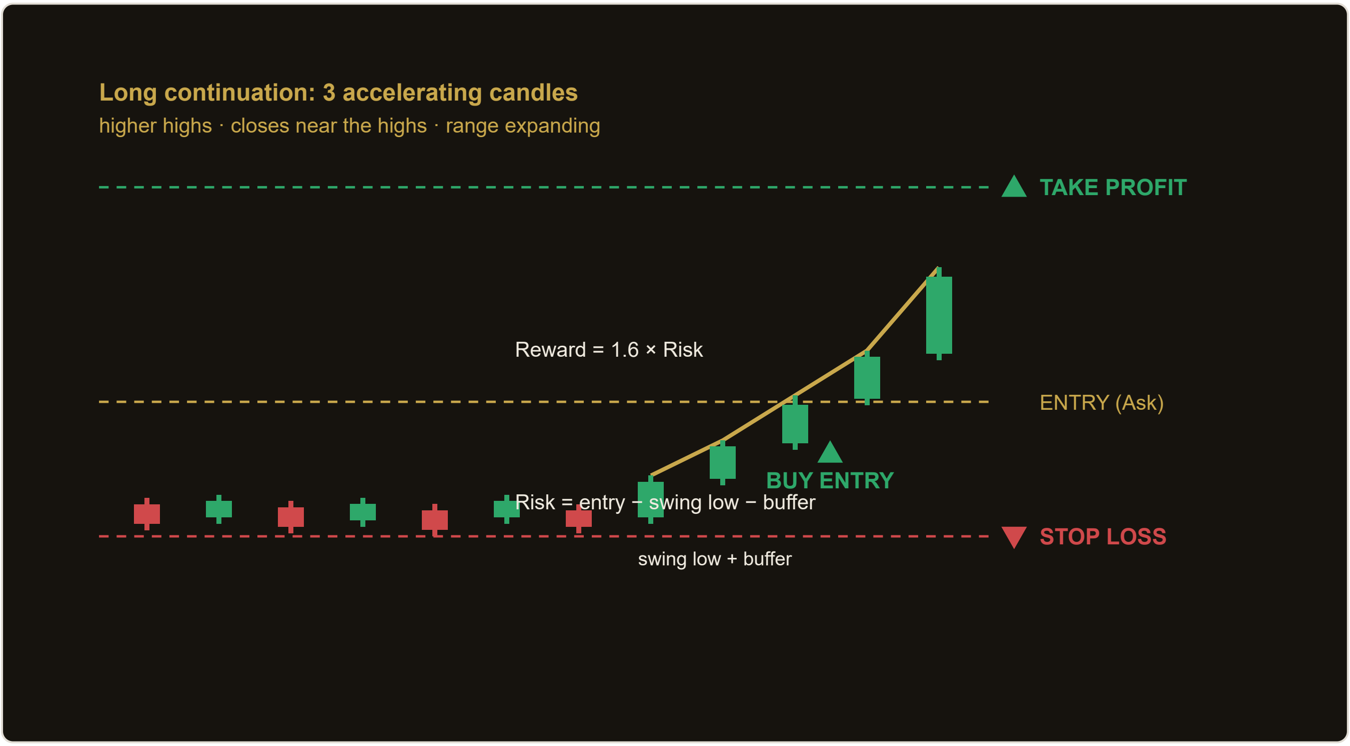
### Exit Logic & Risk Anchoring

There is no separate exit signal. Each trade carries a fixed stop loss and take profit from the moment it is opened, and the position closes when one of them is hit. Because the stop is anchored to the actual swing extreme of the run (plus a volatility-scaled buffer) and the target is a multiple of that risk, the reward-to-risk geometry is consistent across instruments and timeframes.

> **Note — why "no pullback".** Most continuation systems wait for a retracement to enter at a better price. Expanding Thrust Runner deliberately does the opposite: it enters into strength, accepting a wider swing-based stop in exchange for catching the part of a move where acceleration is highest. The `StopBufferFrac` buffer keeps the stop just beyond the structural swing so normal noise does not trip it.

## Strategy in Action

The illustration below shows an example of how the strategy identifies a setup and triggers its entry and exit. This is a simplified, illustrative example for educational purposes — not real market data.



*Illustrative example only. Actual market behaviour varies.*

## Parameters

| Parameter | Default | Description |
|---|---|---|
| **ThrustBars** | `3` | Number of consecutive same-direction candles that must form the thrust run. Range 2–6, step 1. |
| **ClosePosMin** | `0.65` | Minimum close position within each run candle's range (1.0 = close exactly at the extreme). Range 0.50–0.90, step 0.05. |
| **MinThrustMult** | `2.0` | Run net travel must be at least this multiple of the recent average candle range. Range 1.0–5.0, step 0.5. |
| **RangeWindow** | `14` | Window (in bars, behind the run) used to compute the average candle range yardstick. Range 8–30, step 2. |
| **StopBufferFrac** | `0.3` | Stop buffer beyond the run's swing extreme, as a fraction of the last candle's range. Range 0.05–0.8, step 0.05. |
| **RewardRisk** | `1.6` | Take-profit distance as a multiple of the stop risk. Range 1.0–3.5, step 0.1. |
| **Lots** | `0.10` | Fixed position size (lots). Range 0.01–1.0, step 0.05. |
| **Magic** | `1001` | Magic number used to identify and isolate this EA's positions. |

## Recommended Settings

Because the EA is volatility-adaptive (it measures thrust against the recent average range), the defaults are a sensible starting point on most liquid instruments. The notes below help you tune for character rather than for a specific market.

### SYMBOLS & TIMEFRAME

- **Timeframe:** `H1` is the recommended baseline. `M15` – `M30` generate more signals but more noise; `H4` gives fewer, larger thrusts.
- **Symbols:** instruments that produce clean directional bursts — major FX pairs, gold (XAUUSD), and index CFDs — suit a continuation model best.

### TUNING GUIDANCE

- **Stricter signals:** raise `ClosePosMin` toward 0.80 and `MinThrustMult` toward 3.0 to demand cleaner, larger thrusts (fewer, higher-quality trades).
- **More signals:** lower `ThrustBars` to 2 and `MinThrustMult` toward 1.5 — expect more entries and more false starts.

- **Stop width:** increase `StopBufferFrac` on noisier symbols so normal wicks do not clip the swing-based stop.
- **Targets:** `RewardRisk` of 1.6 balances hit-rate against payoff; momentum traders may push it to 2.0–2.5 to let runners extend.

**Example setup — XAUUSD H1**

Suppose three consecutive bullish H1 candles each close in the top third of their range, each printing a higher high, with the last candle at least as tall as the first. If the run's net travel (last close minus first open) exceeds 2.0× the average range of the prior 14 bars, the EA buys at market. The stop sits just below the run's lowest low (minus 0.3 × the last candle's range) and the target is placed 1.6× that risk above the entry.

**Tip.** Always validate any parameter change in the MT5 **Strategy Tester** over several years and multiple market regimes before live use. Optimised values that look excellent in-sample frequently fail out-of-sample — favour settings that are robust across a broad neighbourhood, not a single peak.

## How to Install on MetaTrader 5

1. Copy `ExpandingThrustRunner.ex5` to your MT5 `MQL5\Experts\` folder
2. Restart MetaTrader 5 and refresh the Navigator panel
3. Drag the EA onto a chart matching the recommended symbol and timeframe
4. Configure the input parameters and click **OK**
5. Enable **Algo Trading** in the MT5 toolbar

## Risk Warning

Trading foreign exchange, CFDs, and other leveraged financial instruments involves substantial risk of loss and is not suitable for all investors. The strategies and tools described in this document are provided for **educational purposes only** and do not constitute financial advice, investment recommendations, or solicitation to trade. Always consult a qualified financial adviser before making trading decisions. Past backtest performance is not indicative of future results.