

# Momentum Thrust Continuation

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Momentum / Trend Continuation	M15	<a href="http://www.algotbot.live">www.algotbot.live</a>

**⚠ 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

**Momentum Thrust Continuation** is a trend-following Expert Advisor built on a simple conviction principle: a trend is only worth joining when price *moves with force*. Rather than reacting to every wiggle around a moving average, the EA measures how far price has travelled over the last few bars (its "momentum") and compares that displacement against the market's current volatility, as gauged by the Average True Range (ATR).

When price pushes further than a chosen multiple of ATR **in the direction of the EMA trend**, and the signalling bar closes in that same direction, the EA treats the move as a genuine thrust and rides the continuation. Every decision is taken on a fully **closed bar** — evaluated once per bar — so signals never repaint on an unfinished candle.

The strategy was designed with **GBPJPY** and **XAUUSD** on the **M15** timeframe in mind, but it is entirely symbol- and timeframe-agnostic: it trades whatever chart it is attached to. Both the EMA trend filter and the ATR are computed internally, so the EA is self-contained and dependency-free.

**Core idea:** Trend + Thrust + Confirmation. Price must be on the correct side of the EMA, the recent momentum must exceed  $\text{ThrustMult} \times \text{ATR}$ , and the signal bar must close in the trade's direction. All three conditions must align before a position is opened.

# How It Works

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## 1. Trend Filter — EMA

An Exponential Moving Average of `TrendPeriod` closes defines the prevailing direction. Only **long** setups are considered when the closed bar's price is above the EMA; only **short** setups when it is below. This keeps every trade aligned with the dominant trend.

## 2. Momentum Thrust — Price Change vs ATR

Momentum is the raw N-bar price displacement, `mom = close - close[MomentumLookback]`. This is compared to a volatility-scaled threshold, `thrust = ThrustMult × ATR(ATrPeriod)`. A move only qualifies when it clears this dynamic bar, so the entry standard automatically tightens in quiet markets and loosens when volatility expands.

## 3. Signal-Bar Confirmation

The freshly-closed bar must close in the trade's direction — bullish (`Close > Open`) for longs, bearish (`Close < Open`) for shorts. This filters out thrusts that stall or reverse into the close.

### ENTRY CONDITIONS

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LONG : close > EMA(TrendPeriod)
      AND (close - close[Lookback]) >= ThrustMult × ATR
      AND signal bar closes bullish (Close > Open)

SHORT : close < EMA(TrendPeriod)
      AND (close[Lookback] - close) >= ThrustMult × ATR
      AND signal bar closes bearish (Close < Open)
```

## 4. Exit Logic — ATR-Scaled Stop & Target

Every position is protected by a stop-loss and take-profit sized directly from the ATR at entry, so risk adapts to market volatility rather than using fixed pip distances:

- **Long:** `SL = Ask - SLAtrMult × ATR`, `TP = Ask + TpAtrMult × ATR`
- **Short:** `SL = Bid + SLAtrMult × ATR`, `TP = Bid - TpAtrMult × ATR`

With the defaults (`SLAtrMult = 2.0`, `TpAtrMult = 3.0`) each trade carries a built-in **1.5 : 1 reward-to-risk** profile. Positions are closed by the broker when either level is touched.

## 5. Trade & Risk Management

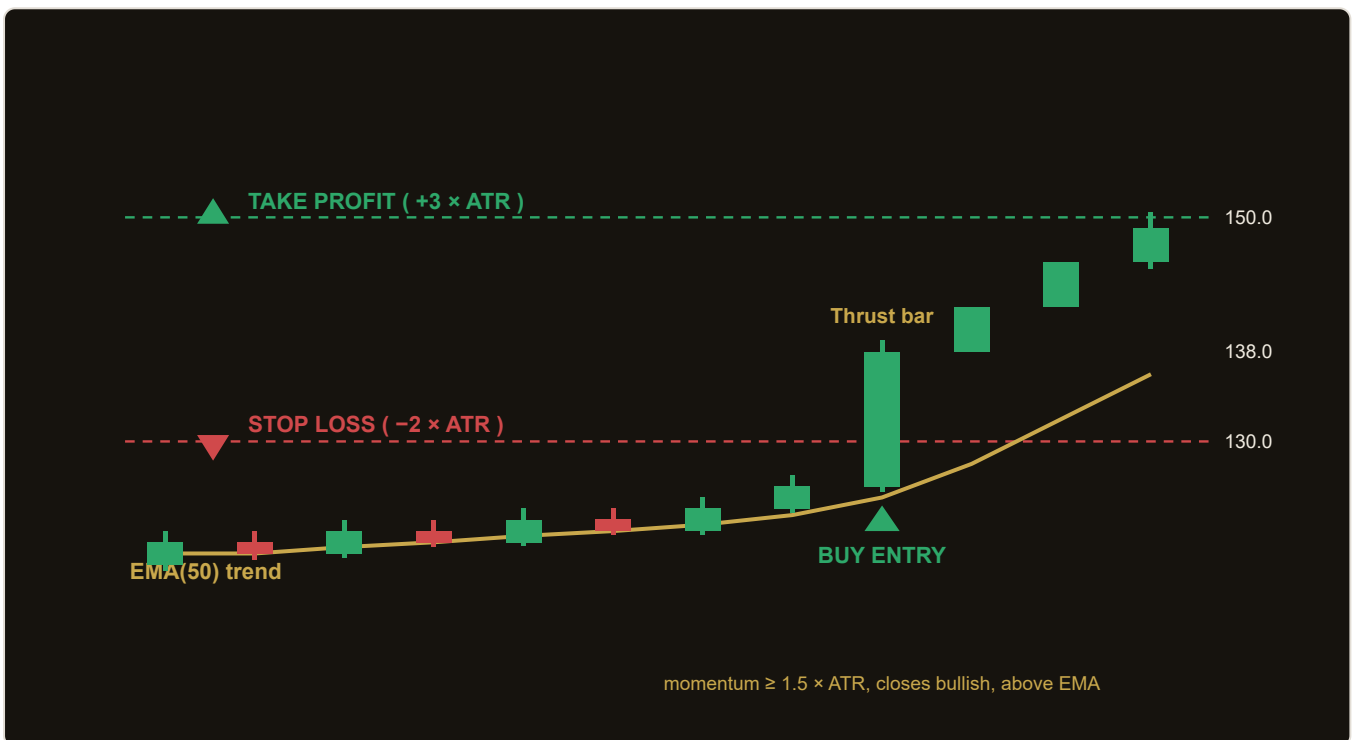
- **One position per magic:** only a single trade is held at a time for this EA's magic number (default `3207`).

- **Spread guard:** when `MaxSpreadPoints > 0`, new entries are skipped while the current spread exceeds that limit (0 disables the check).
- **Fixed lot sizing:** each trade uses a constant `Lots` volume.
- **Bar-close execution:** a new-bar detector ensures signals are evaluated exactly once, on the last completed candle.

## Strategy in Action

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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

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Parameter	Default	Description
TrendPeriod	50	EMA trend-filter period. Trades are only taken on the trend side of this average. Range 20–200, step 10.
MomentumLookback	4	Number of bars used to measure momentum ( <code>close - close[N]</code> ). Range 2–20, step 1.
AtrPeriod	14	ATR period used for the thrust threshold and stop/target sizing. Range 5–30, step 1.
ThrustMult	1.5	Thrust threshold as a multiple of ATR. Momentum must clear <code>ThrustMult × ATR</code> . Range 0.5–4.0, step 0.1.
SlAtrMult	2.0	Stop-loss distance as a multiple of ATR from the entry price. Range 0.5–5.0, step 0.1.
TpAtrMult	3.0	Take-profit distance as a multiple of ATR from the entry price. Range 1.0–8.0, step 0.5.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.0, step 0.05.
MaxSpreadPoints	0	Maximum spread (in points) allowed to enter. 0 disables the guard. Range 0–200, step 5.
Magic	3207	Magic number identifying this EA's positions (enforces one-position-per-magic).

## Recommended Settings

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The EA ships with sensible defaults tuned for volatile intraday instruments. A practical starting point:

- **Symbols:** GBPJPY, XAUUSD (or other trending, higher-volatility instruments)
- **Timeframe:** M15
- **Trend / Momentum / ATR:** `TrendPeriod = 50` , `MomentumLookback = 4` , `AtrPeriod = 14`
- **Thrust & risk:** `ThrustMult = 1.5` , `SlAtrMult = 2.0` , `TpAtrMult = 3.0`
- **Position size:** `Lots = 0.10` (scale to your account risk)

**Tuning tips:** Raise `ThrustMult` to demand stronger, cleaner breakouts (fewer but higher-conviction entries); lower it to trade more frequently. Widen `SlAtrMult` to give trades more room on noisy pairs, and adjust `TpAtrMult` to change the reward-to-risk balance. On instruments with variable spreads, set `MaxSpreadPoints` to avoid entering during costly spikes.

### Example — a long thrust

On M15 GBPJPY, ATR reads 0.180. With `ThrustMult = 1.5` the thrust threshold is 0.270. Price is trading above EMA(50); over the last 4 bars it has risen 0.310, clearing the threshold, and the signal bar closes bullish. The EA buys 0.10 lots, places the stop  $2 \times \text{ATR}$  (0.360) below the ask and the target  $3 \times \text{ATR}$  (0.540) above it — a 1.5 : 1 reward-to-risk trade.

**Always validate before live use.** Backtest across multiple symbols and market regimes, then run on a demo account. Momentum continuation strategies can suffer during choppy, range-bound conditions where thrusts fail to follow through.

## How to Install on MetaTrader 5

- 1 Copy `MomentumThrustContinuation.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.

