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Velocity Thrust Runner

Expert Advisor Documentation

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

Overview

Velocity Thrust Runner is a pure price-action momentum Expert Advisor that uses **no indicators of any kind** — no moving average, RSI, ATR, or anything derived. Every decision is read directly from raw OHLC candles.

The strategy is built on a simple but precise idea: genuine momentum is not a single large candle, it is **velocity** — sustained, accelerating directional travel across consecutive bars. Velocity Thrust Runner confirms this with three independent gates measured from raw price:

- **Run** — a sequence of consecutive same-direction bars, proving price is travelling with persistence rather than chopping.
- **Velocity** — the net distance the run covers, measured against the quiet average bar range that preceded it.
- **Acceleration** — the most recent bar must still be expanding, proving the thrust is alive and not exhausting.

When all three gates pass, the EA enters at market in the run's direction. Risk is defined entirely by market structure: the stop sits just beyond the run's origin extreme, and the target is a fixed reward-to-risk multiple of that distance. Each run is traded exactly once — at the moment momentum is confirmed — so the EA never chases a move late.

How It Works

Bar-by-bar processing

Velocity Thrust Runner evaluates the market only on a **newly-closed bar**. On each tick it checks whether the forming bar's timestamp has changed; when it has, the bar that just completed is the one analysed. This keeps the logic deterministic and free of intra-bar noise — all calculations use fully-closed candles only.

Gate 1 — Run (persistence)

The EA inspects the last `RunLength` closed bars. Every one of them must share the same **body direction** (close above open for a bullish run, close below open for a bearish run). A doji — where close equals open — breaks the run.

Crucially, the EA fires **only on the bar where the run first reaches** `RunLength`. The bar immediately before the run must be the opposite direction (or neutral). If that prior bar shares the run's direction, the run was already longer and an entry would have fired earlier — so the EA skips it. This guarantees each run is traded once and never chased.

Gate 2 — Velocity (speed)

The EA measures the run's **net displacement**: the close of the last bar minus the open of the first bar of the run (reversed for shorts). It then compares this to the **average bar range of the quiet bars before the run**, computed over `AvgRangePeriod` bars.

```
displacement  =  close(last run bar)  -  open(first run bar)
avgRange      =  mean( high - low )  over the AvgRangePeriod bars before the run

PASS when:    displacement  ≥  VelocityMult  ×  avgRange
```

This ensures the run represents fast directional travel relative to the recent baseline — not a slow grind that merely happens to be one-directional.

Gate 3 — Acceleration (thrust still alive)

Finally, the range of the most recent bar must still be expanding relative to the quiet baseline:

```
lastRange  =  high(last bar)  -  low(last bar)

PASS when:  lastRange  ≥  AccelMult  ×  avgRange
```

If the latest bar's range has collapsed below this threshold, the thrust is judged to be fading and no trade is taken.

Entry

When all three gates pass, the EA enters **at market** in the run's direction — a buy at the Ask for a bullish run, a sell at the Bid for a bearish run. Only **one position at a time** is held per magic number; while a trade is open, the EA waits for the stop-loss or take-profit to resolve before evaluating new setups.

Exit — Stop Loss & Take Profit

Risk is structural, not arbitrary. The stop is placed just beyond the run's origin extreme:

- **Long:** stop = lowest low of the run − `buffer`
- **Short:** stop = highest high of the run + `buffer`

The buffer is `StopBufferPct × avgRange`, giving the trade a little breathing room beyond structure. The take-profit is then a fixed multiple of the resulting risk distance:

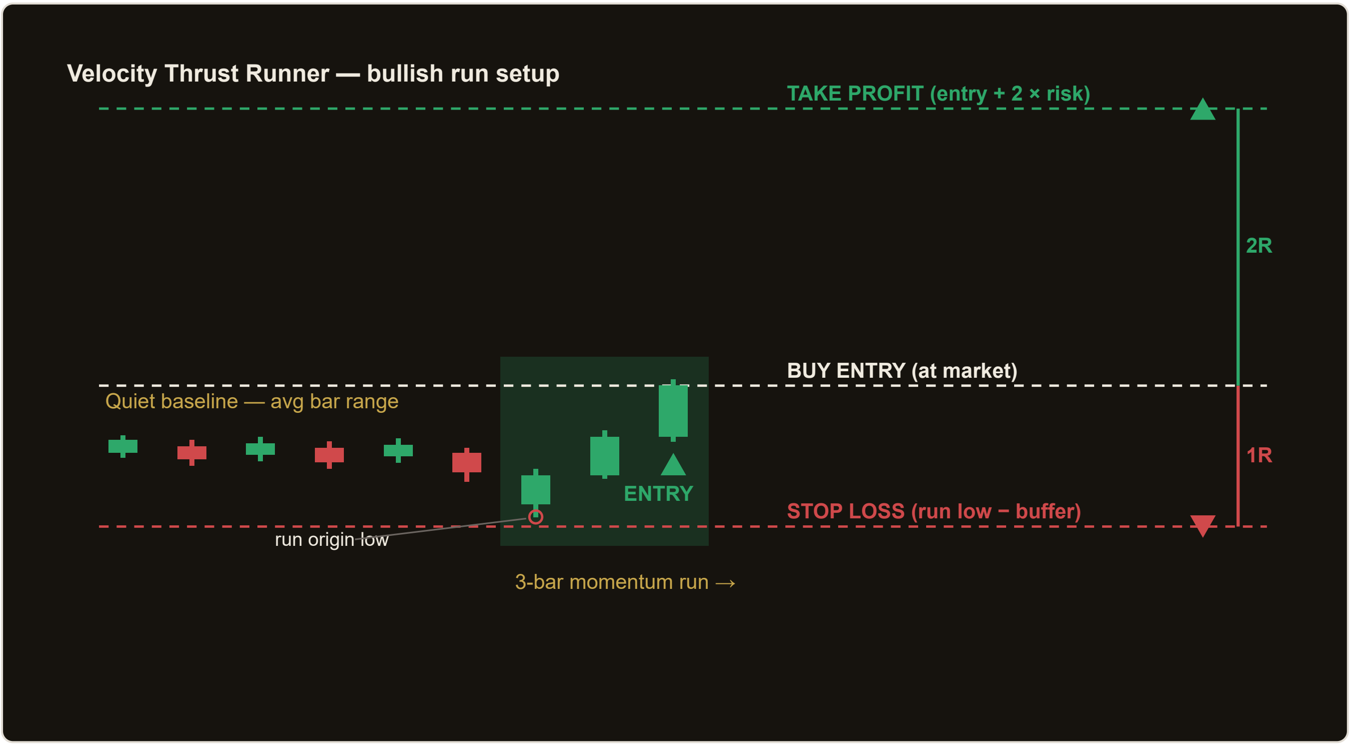
```
risk  =  | entry  -  stop |
take-profit  =  entry  ±  RewardRisk  ×  risk
```

Both stop and target are attached to the order at entry, so the position is fully managed by the broker once placed. If the computed risk is zero or negative the trade is rejected as invalid.

> **Why it never chases:** because the EA only fires on the exact bar a run reaches its required length — and refuses to act if the run was already longer — entries land at the confirmation of momentum, with the structural origin of the move still close behind to anchor a tight, logical stop.

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
Lots	`0.10`	Trade size in lots. Range 0.01 – 1.00, step 0.05.
RunLength	`3`	Number of consecutive same-direction bars required to confirm a momentum run. The EA fires only on the bar where the run first reaches this length. Range 2 – 8, step 1.
AvgRangePeriod	`14`	Lookback, in bars, for the pre-run average bar range — the quiet baseline the thrust must beat. Range 5 – 40, step 1.
VelocityMult	`2.00`	The run's net displacement must exceed this multiple of the average range (velocity gate). Range 0.50 – 6.00, step 0.25.
AccelMult	`1.00`	The latest bar's range must exceed this multiple of the average range (acceleration gate). Range 0.50 – 2.50, step 0.10.
StopBufferPct	`0.25`	Extra stop distance beyond the run's origin extreme, expressed as a fraction of the average range. Range 0.00 – 1.00, step 0.05.
RewardRisk	`2.00`	Take-profit distance as a multiple of the (entry − stop) risk. Range 1.00 – 5.00, step 0.25.
Magic	`1001`	Unique identifier tagging this EA's orders so it manages only its own positions. Use a distinct value per chart if running multiple instances.

Recommended Settings

Velocity Thrust Runner is timeframe-agnostic — because every threshold is relative to the local average bar range, it adapts to the volatility of whatever chart it runs on. As a practical starting point, the M15 to H1 range gives runs enough structure to be meaningful without the noise of very fast charts.

Balanced (default) profile — trending FX majors, H1

RunLength `3` · AvgRangePeriod `14` · VelocityMult `2.00` · AccelMult `1.00` · StopBufferPct `0.25` · RewardRisk `2.00`. A well-rounded setup: catches clean three-bar thrusts and targets twice the structural risk.

Selective profile — fewer, stronger signals

RunLength `4` · VelocityMult `3.00` · AccelMult `1.20` · RewardRisk `2.50`. Demands a longer, faster, still-accelerating run before committing — fewer trades, but each one is a more decisive thrust.

Tuning tip: raise `VelocityMult` and `AccelMult` to be stricter about how fast and how alive a thrust must be (fewer trades); lower them to take more, gentler runs. Widen `StopBufferPct` on noisier instruments to avoid being stopped on the pullback that often follows a thrust. Always validate any change in the MT5 Strategy Tester on your chosen symbol before going live.

How to Install on MetaTrader 5

1. Copy `VelocityThrustRunner.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.