

# Fair Value Gap Runner

Expert Advisor Documentation

## PLATFORM

MetaTrader 5 (MT5)

## TYPE

Momentum Continuation

## TIMEFRAME

M15

## WEBSITE

[www.algotbot.live](http://www.algotbot.live)

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## Overview

**Fair Value Gap Runner** is a pure price-action Expert Advisor that trades the *fill* of a fair-value gap (also called an imbalance) in the direction of the impulse that created it. A fair-value gap is a three-candle footprint: a strong middle candle moves so quickly that the wick of the first candle never overlaps the wick of the third, leaving an untraded “vacuum” of price. Markets tend to revisit that vacuum to rebalance, and the original impulse direction usually resumes once the gap is tapped.

The EA waits for price to retrace into a *fresh* gap for the first time, confirms that the tap candle closes back beyond the gap’s far edge, and then rides the continuation. It uses **no technical indicators** — the gap, the impulse strength, the gap size, and every stop and target are measured purely from raw candle geometry. The only average involved is a plain mean candle range, computed inline from raw highs and lows, used solely to scale the thresholds to current volatility.

The strategy is designed for liquid instruments such as **EUR/USD** or **XAU/USD** on the **M15** timeframe, but the logic is symbol- and timeframe-agnostic and works on any liquid market.

# How It Works

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## 1. Volatility scale

On each newly-closed bar, the EA first computes a plain mean candle range over the most recent `LookbackRange` closed bars (the high-minus-low of each bar, averaged). This single number, `avgRange`, scales all of the strategy's thresholds so they adapt to current volatility:

- **Minimum impulse body** = `ImpulseFactor × avgRange`
- **Minimum gap height** = `MinGapFactor × avgRange`
- **Stop-loss buffer** = `BufferFrac × avgRange`

## 2. Detecting a fair-value gap

The EA scans backward for the most recent gap that is no older than `ZoneExpiry` bars. A valid gap is a three-candle structure where the middle candle is a genuine thrust:

### BULLISH GAP (LONG CONTINUATION)

- Three consecutive closed candles where the **high of the oldest** is below the **low of the newest** (an up-vacuum).
- The middle candle is bullish with a body of at least `ImpulseFactor × avgRange` (a real thrust).
- The gap height (newest low – oldest high) is at least `MinGapFactor × avgRange` (meaningful, not noise).

### BEARISH GAP (SHORT CONTINUATION)

The exact mirror: a down-vacuum where the **low of the oldest** is above the **high of the newest**, with a bearish thrust candle in the middle that satisfies the same size filters.

## 3. Freshness filter

A gap is only traded if it is still untouched. Between the bar on which the gap formed and the candidate tap candle, no earlier candle may have already dipped into the gap (the EA wants the *first* tap), and no earlier candle may have closed beyond the gap's base (which would have filled or invalidated it). This ensures the EA reacts to the first clean retracement, not a re-test.

## 4. Entry trigger

The just-closed candle (shift 1) is the candidate tap. For a bullish gap, the EA enters **long** when that candle:

- **Taps** the gap — its low reaches into the gap zone while its high stays within range of the base; and
- **Holds** the gap — it closes back *above* the gap base (the far edge).

For a bearish gap the mirror applies: the tap candle rallies into the gap from below and closes back *under* the gap base, triggering a **short**.



## Parameters

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Parameter	Default	Description
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.00, step 0.01.
ImpulseFactor	1.20	Minimum middle-candle body, as a multiple of the average candle range, required to qualify as a genuine impulse. Range 0.50–3.00, step 0.10.
MinGapFactor	0.25	Minimum gap height, as a multiple of average range, for the gap to be considered meaningful. Range 0.05–1.50, step 0.05.
RiskReward	2.0	Reward-to-risk multiple used to set the take-profit relative to the stop distance. Range 1.0–5.0, step 0.5.
ZoneExpiry	12	Maximum age of a gap, in bars, that the EA will still trade. Range 2–40, step 1.
LookbackRange	20	Number of recent closed bars used to compute the average candle range (volatility window). Range 10–60, step 1.
BufferFrac	0.20	Extra stop-loss padding beyond the gap base, as a multiple of average range. Range 0.00–1.00, step 0.05.
Magic	7733	Unique identifier tagging this EA's orders so it manages only its own positions.

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## Recommended Settings

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The EA ships with balanced defaults suited to liquid majors and gold. As a starting point:

- **Symbol:** EUR/USD or XAU/USD (any liquid instrument works).
- **Timeframe:** M15.
- **Impulse / gap filters:** keep `ImpulseFactor = 1.20` and `MinGapFactor = 0.25` for a sensible balance between frequency and gap quality. Raise both for fewer, higher-conviction setups.
- **Reward:risk:** `RiskReward = 2.0` targets twice the risked distance per trade.
- **Volatility window:** `LookbackRange = 20` adapts thresholds to recent conditions; widen it on noisier symbols.

**Tip:** Because every threshold scales with the average candle range, the same parameter set transfers reasonably well across symbols and timeframes. Always validate on a demo account and run the Strategy Tester for your specific broker, symbol, and spread before going live.

## How to Install on MetaTrader 5

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- 1 Copy `FairValueGapRunner.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

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