

Vwap Band Fvg Reversion Hedge

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Mean Reversion + Hedge

TIMEFRAME

Intraday (M15 recommended)

WEBSITE

www.algotbot.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

Vwap Band Fvg Reversion Hedge is a pure price-action, session-anchored VWAP mean-reversion Expert Advisor with a built-in protective breakout hedge. It uses no library indicators — the Volume-Weighted Average Price (VWAP) and its deviation bands are computed directly from raw price and volume, and trade confirmation comes from candlestick patterns (engulfing and pin-bar rejections), Fair Value Gaps (FVGs), and swept support/resistance levels.

The core thesis is statistical: intraday price tends to rotate around its volume-weighted mean. When price stretches to an outer deviation band and snaps back with a confirmed momentum reversal that is *confluent* with a Fair Value Gap or a tagged S/R level, the EA fades the move back toward VWAP — this is the **base trade**. The take-profit is the VWAP itself (the statistical mean).

Because mean-reversion fails on strong trend days, the strategy carries a self-defence mechanism. If price continues to close well *beyond* the entry band after the base is opened — signalling a directional breakout rather than a rotation — the EA opens an opposite-direction **hedge** sized larger than the base. The base is then stopped for a small, controlled loss while the hedge runs the continuation move, recovering and potentially profiting from the breakout.

In one line: Fade the stretch back to VWAP when structure confirms; if the fade fails and price keeps running, flip into a larger continuation hedge to recover the position.

How It Works

1. Session-Anchored VWAP & Deviation Bands

On every newly completed bar the EA folds the bar's typical price $(\text{High} + \text{High} + \text{Low} + \text{Close}) / 3$ — weighted by tick volume — into running accumulators. From these it derives:

- **VWAP** = cumulative (typical price × volume) ÷ cumulative volume.
- **Volume-weighted standard deviation** (σ), from the running sum of squared typical prices.
- **Upper band** = VWAP + `BandSigma` × σ .
- **Lower band** = VWAP - `BandSigma` × σ .

The accumulators are **re-anchored at the start of each calendar (UTC) trading day**, so VWAP always reflects the current session rather than stale history. The EA will not trade until at least `SessionMinBars` bars have built up in the current session and enough total history exists (`RangeLookback` + 3 bars).

2. The Base Trade — Fading the Band Back to VWAP

The EA evaluates the just-closed bar (and the two bars before it) for a high-conviction reversal at a band. All conditions must align:

LONG (BUY) FADE — LOWER BAND

- **Stretch:** the signal bar's low pierced or touched the lower band.
- **Reversal candle:** a bullish *engulfing* (with a body of at least `MinBodyRangeFraction` of average range) or a bullish *pin bar* (lower wick $\geq 1.5\times$ the body, close in the upper half of the range).
- **Confluence:** a bullish Fair Value Gap (a 3-bar imbalance where the signal bar's low is above the high of three bars back) or a support sweep (the low tagged the prior-range low within $0.15\times$ average range).
- **Snap-back:** the candle closed back above the lower band.

On a valid long signal the EA buys at market with **Take-Profit = VWAP** and **Stop-Loss** = the lower of the signal-bar low / prior-range low, minus a `StopBufferMult` × average-range buffer. The trade is only taken if the distance to VWAP is at least `MinTargetMult` × average range (a worthwhile reward).

SHORT (SELL) FADE — UPPER BAND

- **Stretch:** the signal bar's high pierced or touched the upper band.
- **Reversal candle:** a bearish engulfing (momentum body) or a bearish pin bar (upper wick $\geq 1.5\times$ body, close in the lower half of the range).

- **Confluence:** a bearish Fair Value Gap (signal-bar high below the low of three bars back) *or* a resistance tag (high reached the prior-range high within $0.15\times$ average range).
- **Snap-back:** the candle closed back below the upper band.

The mirror logic applies: sell at market with TP = VWAP and SL above the high plus the buffer, subject to the same minimum-target filter.

3. The Protective Hedge — When the Fade Fails

After a base position is opened the EA stores the VWAP and the entry band. On each subsequent bar, while a base is live and no hedge yet exists, it checks for a fade failure:

- **Long base failing:** the bar closes further *below* the entry band by more than `HedgeTriggerMult` \times average range \rightarrow the EA opens a **Sell hedge** targeting a continuation down.
- **Short base failing:** the bar closes further *above* the entry band by more than `HedgeTriggerMult` \times average range \rightarrow the EA opens a **Buy hedge** targeting a continuation up.

The hedge volume is `Lots` \times `HedgeMultiplier` (larger than the base). Its take-profit is the breakout-bar close extended by `HedgeTargetMult` \times average range; its stop-loss is set back at the original VWAP reference (the recovery level). Only one hedge is placed per cycle.

4. Cycle & Position Management

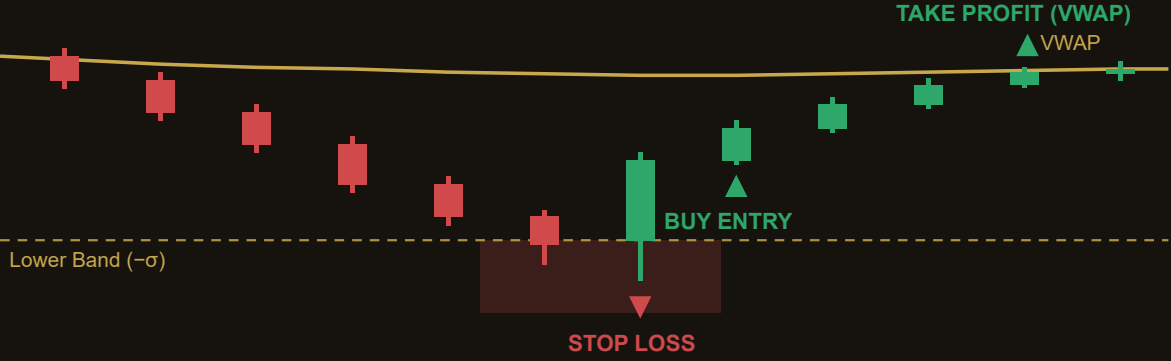
The EA acts **once per completed bar** and identifies its own positions by magic number and order comment (`VBFRHb` for the base, `VBFRHh` for the hedge). A fresh base trade is only opened when the account is completely flat on this magic number, preventing overlapping cycles. When all positions close, the cycle state resets and the EA is ready to look for the next stretch-and-fade setup.

Single timeframe: all bar reads use the chart's own timeframe. Attach the EA to one chart at the timeframe you intend to trade — there are no multi-timeframe dependencies.

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.

Upper Band (+ σ)



Price stretches to the lower band, sweeps support, then a bullish pin fades back to VWAP.

Illustrative example only. Actual market behaviour varies.

Parameters

Parameter	Default	Description
BandSigma	2.0	Band width in standard deviations from VWAP. Higher = wider bands, fewer but more extreme stretches. Range 1.0–3.0, step 0.25.
HedgeTriggerMult	1.0	Fade-failure trigger: how far beyond the entry band (in × average range) price must close to open the hedge. Range 0.25–2.5, step 0.25.
HedgeMultiplier	1.5	Hedge volume multiplier — hedge lots = Lots × this value. Range 1.0–3.0, step 0.25.
HedgeTargetMult	2.0	Hedge take-profit distance from the breakout close, in × average range. Range 0.5–4.0, step 0.5.
StopBufferMult	0.5	Base stop-loss buffer beyond the swing extreme, in × average range. Range 0.1–2.0, step 0.1.
MinBodyRangeFraction	0.4	Momentum filter: minimum reversal-candle body size as a fraction of average range. Range 0.1–1.0, step 0.1.
MinTargetMult	0.5	Minimum required distance from entry to VWAP (TP), in × average range. Filters out low-reward fades. Range 0.1–2.0, step 0.1.
RangeLookback	20	Lookback window (bars) for support/resistance and the average-range calculation. Range 5–60, step 5.
SessionMinBars	8	Minimum bars into the current session before any trade is allowed. Range 3–40, step 1.
Lots	0.10	Base trade volume in lots. Range 0.01–1.0, step 0.05.
Magic	540231	Magic number used to identify and manage this EA's positions.

Tip: The base TP (VWAP) is dynamic — it moves as new bars accumulate. `MinTargetMult` guards against taking fades that are already too close to the mean to be worth the risk.

Recommended Settings

Vwap Band Fvg Reversion Hedge is an intraday rotation strategy. Session-anchored VWAP works best where there is a clear daily session and steady tick volume.

- **Timeframe:** M15 is a good starting point. M5 yields more setups but more noise; M30 gives cleaner bands with fewer signals.
- **Instruments:** liquid, range-prone markets — major FX pairs (EUR/USD, GBP/USD), index CFDs, or gold during their active sessions.
- **Band width:** keep `BandSigma` at 2.0 for a balance of frequency and quality; raise toward 2.5–3.0 on choppy instruments to demand a larger stretch.
- **Hedge sizing:** `HedgeMultiplier` at 1.5 recovers a failed fade without aggressive martingale-style escalation. Increase only with full awareness of the larger exposure.

Example configuration — EUR/USD M15

BandSigma = 2.0, HedgeTriggerMult = 1.0, HedgeMultiplier = 1.5, HedgeTargetMult = 2.0, StopBufferMult = 0.5, MinBodyRangeFraction = 0.4, MinTargetMult = 0.5, RangeLookback = 20, SessionMinBars = 8, Lots = 0.10. Always validate on the MT5 Strategy Tester and a demo account before going live.

⚠ **Hedging & account type:** This EA can hold an opposing base and hedge position simultaneously. It requires a **hedging** account (not netting) to behave as designed, and you must verify your broker permits hedging. The hedge is larger than the base, so position sizing and margin should be planned for the combined exposure.

How to Install on MetaTrader 5

- 1 Copy `VwapBandFvgReversionHedge.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.