

Anchored Vwap Compression Breakout

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Volatility Squeeze Breakout

TIMEFRAME

M15 – H1

WEBSITE

www.algotbot.live

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Overview

Anchored Vwap Compression Breakout is a dual anchored-VWAP squeeze and breakout system. Most anchored-VWAP strategies drop a single anchor and either fade it or ride it. This Expert Advisor instead runs *two* anchored VWAPs at once and trades the precise moment they agree on value.

The two averages are anchored at the most recent swing extremes found within a lookback window:

- **VWAP-Hi** is anchored at the most recent **swing-high** bar (the highest high in the window) and volume-weighted forward to the present — the average price paid by everyone who bought since the top.
- **VWAP-Lo** is anchored at the most recent **swing-low** bar (the lowest low in the window) and volume-weighted forward to now — the average price of everyone who bought since the bottom.

When those two averages **converge** — their gap shrinks below a fraction of ATR — the buyers-from-the-top and buyers-from-the-bottom have reached the *same* fair value. The market is coiled in equilibrium: a volume-weighted “squeeze”. Range rarely survives such compression, so the strategy arms itself and takes the first **conviction break** of the tighter rail.

Every calculation is volume-weighted (using tick volume) and ATR-scaled, so the EA adapts to any symbol and volatility without ever knowing the point size. It operates on a single timeframe — whatever chart it is attached to at run time. Its natural home is a liquid FX major, gold, or an index on M15 to H1.

Core idea in one line: two anchored VWAPs converging is the market agreeing on price — and agreement precedes expansion. This EA waits for that agreement, then rides the first decisive break out of it.

How It Works

1. Anchoring the two VWAPs

On each newly-closed bar, the EA scans the last `AnchorLookback` closed bars and locates the highest high (the swing-high anchor) and the lowest low (the swing-low anchor). From each anchor it computes a volume-weighted average of the typical price $(High + Low + Close) / 3$, weighting every bar by its tick volume, forward to the current bar. This yields **VWAP-Hi** and **VWAP-Lo**.

2. The compression (squeeze) gate

The upper rail is the higher of the two VWAPs; the lower rail is the lower of the two. Their difference is the **gap**. The pair counts as **compressed** only when:

$$gap \leq CompressionAtrFrac \times ATR$$

If the two averages are not compressed, no trade is considered. This regime filter is what keeps the EA out of trending, non-equilibrium conditions and focuses it on coiled markets that are primed to expand.

3. Entry — the conviction breakout

While the pair is compressed, and provided no position is already open for this magic number and the current spread is within limits, the EA inspects the freshly-closed bar. It demands a **conviction candle**: the body must be at least `BodyFrac` of the candle's full range. A marginal close does not qualify.

- **Long:** a *bullish* bar closes clear above the upper rail by at least $BreakoutAtrFrac \times ATR$, while the prior bar's close was still inside the rail-plus-buffer. The EA buys the expansion.
- **Short:** a *bearish* bar closes clear below the lower rail by the same ATR buffer, while the prior close was still inside. The EA sells the expansion.

The prior-bar-inside condition ensures the EA takes the *first* break out of compression, not a chase several bars later.

4. Exit — ATR stop and reward-to-risk target

Every trade is bracketed the instant it is opened. The risk unit is $AtrStopMult \times ATR$:

- **Long:** stop-loss = entry - risk; take-profit = entry + $RewardRisk \times risk$.
- **Short:** stop-loss = entry + risk; take-profit = entry - $RewardRisk \times risk$.

There is no trailing logic or bar-by-bar management — the fixed ATR stop and the reward-to-risk target manage the position to completion. Only one position per magic number is allowed at a time.

Worked example (long)

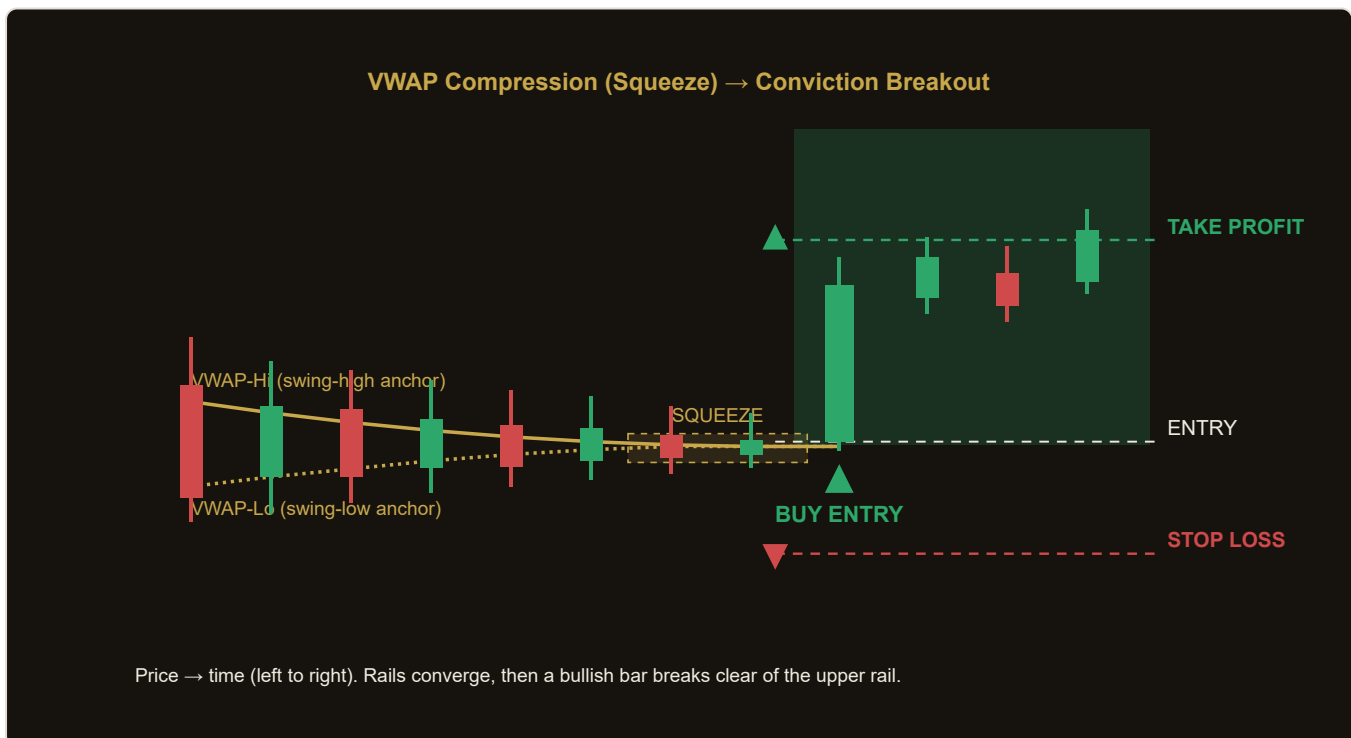
Suppose $ATR = 0.0020$ and the two VWAPs have converged to a gap of 0.0009 . Since $0.0009 \leq 0.60 \times 0.0020 (= 0.0012)$, the pair is compressed. A bullish bar then closes at 1.10450 , clearing the upper rail (1.10400) by more than $0.15 \times ATR$, with a body $\geq 50\%$ of its range. The EA buys at the ask. With `AtrStopMult` = 1.50, risk = 0.0030 , so the stop sits 30 pips below entry and the target sits $1.80 \times 0.0030 = 54$ pips above it.

Filters and safeguards

- **Spread filter:** new entries are skipped whenever the current spread exceeds `MaxSpreadPoints`.
- **One position per magic:** the EA never stacks trades for the same magic number.
- **Conviction body:** the breakout candle's body must meet the `BodyFrac` threshold, filtering marginal pokes and wicks.
- **New-bar processing:** logic runs once per newly-closed bar, never intrabar.

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
AnchorLookback	60	Window (in primary-timeframe bars) in which to locate the swing high and swing low that anchor the two VWAPs. Range 20–200, step 5. Clamped to a floor of 5.
CompressionAtrFrac	0.60	Maximum gap between the two VWAPs, as a fraction of ATR, for the pair to count as compressed and arm trading. Range 0.10–2.50, step 0.10.
BreakoutAtrFrac	0.15	How far beyond the rail (fraction of ATR) the bar must close to confirm the break, filtering marginal pokes and wicks. Range 0.00–1.00, step 0.05.
BodyFrac	0.50	Minimum breakout-candle body divided by its full range — demands a conviction close. Range 0.20–0.90, step 0.05.
AtrPeriod	14	ATR period used as the universal distance unit for compression, breakout buffer, stop and target. Range 5–40, step 1.
AtrStopMult	1.50	Stop distance = AtrStopMult × ATR beyond entry. Range 0.50–4.00, step 0.25.
RewardRisk	1.80	Take-profit distance as a multiple of the ATR risk. Range 0.50–4.00, step 0.10.
MaxSpreadPoints	120	Skip new entries when the current spread (in points) is wider than this. Range 5–400, step 5.
Lots	0.10	Fixed order volume in lots. Range 0.01–1.00, step 0.05.
Magic	5307	Magic number identifying this EA's positions. One position per magic is enforced. Range 0–9,999,999, step 1.

Recommended Settings

The default values are a balanced starting point for a liquid instrument on M15 to H1. Tune to your market and risk tolerance:

- **Symbol & timeframe:** a liquid FX major (e.g. EURUSD), gold (XAUUSD), or a major index, on **M15–H1**. The EA is timeframe-agnostic — it reads whatever chart it is attached to.
- **Compression tightness:** lower `CompressionAtrFrac` (e.g. 0.30–0.50) demands tighter equilibrium and produces fewer, higher-quality signals; higher values arm more often.
- **Breakout confirmation:** raise `BreakoutAtrFrac` and `BodyFrac` in noisy conditions to reject false pokes; lower them for more responsiveness.

- **Risk profile:** `AtrStopMult` and `RewardRisk` together set the trade's geometry. A wider stop with a lower reward-to-risk trades hit-rate for expectancy.
- **Spread guard:** set `MaxSpreadPoints` to reflect your broker's typical spread on the chosen symbol so entries are skipped during illiquid, wide-spread moments.

Tip: always run the strategy tester across several months of history for your exact symbol and timeframe before going live, and start on a demo account. Optimize `CompressionAtrFrac` and `AnchorLookback` together — they jointly define what “coiled” means for your market.

How to Install on MetaTrader 5

- 1 Copy `AnchoredVwapCompressionBreakout.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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