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Maximize Your Profits

Spinning Top Cluster Breakout

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Price-Action Breakout	H1 (M15–H4)	www.algobot.live

Overview

Spinning Top Cluster Breakout is a price-action breakout Expert Advisor that trades the moment market *indecision resolves into trend*. Unlike range-compression setups (NR7, coiled ranges) that measure how *wide* a candle is, this strategy measures how *small a candle's body is relative to its total range* — a different microstructure signal entirely.

A **spinning top** is a candle whose real body is small compared with its high–low range: `|Close − Open| / (High − Low) ≤ BodyRatioMax`. It represents balance — buyers and sellers repeatedly reject the extremes and settle back near the open, regardless of how wide the bar is. A **cluster** of such candles marks an equilibrium pocket where neither side has committed and energy coils inside the pocket's high–low fence.

Resolution arrives with a single **decisive candle**: one whose body dominates its range (`≥ BreakoutBodyRatio`) and that *closes* beyond the pocket fence plus an ATR buffer. A wide-bodied, full-commit candle escaping a zone of indecision is the transition from balance to trend — and that is precisely when the EA enters, with a symmetric long/short rule set and ATR-based stop and target.

Body, not range. The defining insight is that a candle can have a *large range* yet a *tiny body* — long wicks on both sides signal a fight, not commitment. By keying on the body-to-range ratio, this EA reads conviction directly, filtering out chop where nothing has been decided.

How It Works

1. Detecting Indecision (Spinning Tops)

For each completed bar, the EA computes the body-to-range ratio. A bar qualifies as a spinning top when its body is small relative to its total range:

```
bodyRatio = |Close − Open| / (High − Low)
spinning top  →  bodyRatio ≤ BodyRatioMax   (default 0.30)
```

A low ratio means the close finished near the open despite the bar's range being explored in both directions — the hallmark of balance and rejection.

2. The Balance Pocket (Cluster)

The EA looks at the `ClusterWindow` completed bars immediately *before* the current escape candidate. It counts how many of them are spinning tops and records the pocket's fence:

- **Fence high** — the highest `High` across the window bars.
- **Fence low** — the lowest `Low` across the window bars.

If the number of spinning tops in the window reaches at least `MinSpinningTops`, the window is accepted as a genuine equilibrium pocket. Too few spinning tops means there was no real indecision, and the setup is rejected.

3. The Decisive Escape Candle

The bar that just completed (shift 1) is the escape candidate. It must show full commitment — its body must dominate its range:

```
escBodyRatio = |Close − Open| / (High − Low)
decisive  →  escBodyRatio ≥ BreakoutBodyRatio   (default 0.55)
```

A decisive candle alone is not enough; it must also *close* clear of the pocket fence by an ATR-scaled buffer, to reject marginal, borderline breaks:

```
buffer = BreakBufferAtr × ATR

breakUp   = bullish body AND Close > fenceHigh + buffer
breakDown = bearish body AND Close < fenceLow  − buffer
```

4. Entry Rules

- **Long** — a decisive *bullish* candle closes above the cluster high + buffer. The EA buys at the Ask.
- **Short** — a decisive *bearish* candle closes below the cluster low − buffer. The EA sells at the Bid.

The rules are symmetric and mutually exclusive; only one direction can trigger on a given bar. Only **one position per magic number** is held at a time — while a position is open, no new entries are taken.

5. Risk Management (ATR Stop & Target)

Risk is sized from the Average True Range measured over `AtrPeriod` bars, so stops and targets adapt to current volatility:

```
stopDistance   = AtrStopMult   × ATR   (default 1.5 × ATR)
targetDistance = AtrTargetMult × ATR   (default 2.5 × ATR)

Long : SL = entry − stopDistance,  TP = entry + targetDistance
Short: SL = entry + stopDistance,  TP = entry − targetDistance
```

With the default multipliers the target is 2.5× ATR against a 1.5× ATR stop — a reward-to-risk ratio of roughly 1.67 : 1. Stop-loss and take-profit levels are attached to the order at entry; there is no trailing logic.

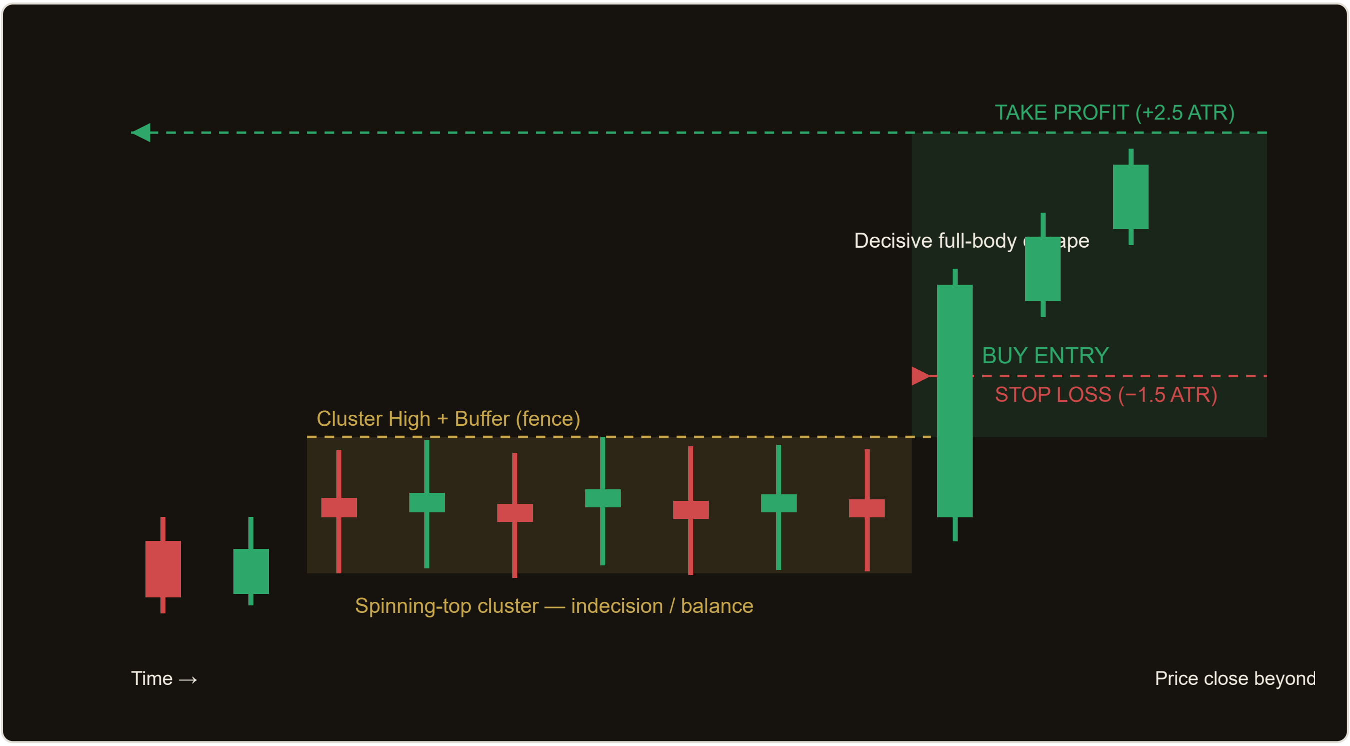
6. Execution & Timing

The EA operates on a **single timeframe** (the chart's symbol and period). It acts only once per bar, on the transition to a fresh forming bar (new-bar detection). The pattern and ATR are always evaluated on completed bars — the escape candle is the bar at shift 1, and the pocket is the `ClusterWindow` bars before it — so signals never repaint intrabar.

> **Why it should work.** Entering only when indecision *resolves* (rather than when it is merely present) filters most chop. The small-body cluster requirement means genuine breakouts from balance are being traded — where trapped counter-trend traders covering and fresh momentum entering both push price the same way.

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.

Worked example (long)

Over the last 6 bars, 4 print small bodies (spinning tops) — a balance pocket with a fence high of 1.10250. ATR is 0.00200. The just-completed bar is a strong bullish candle with a body/range ratio of 0.72 (≥ 0.55) that closes at 1.10310. With `BreakBufferAtr = 0.10`, the required level is 1.10250 + 0.10 × 0.00200 = 1.10270. Since 1.10310 > 1.10270, a long triggers: entry near 1.10310, stop at 1.10310 − 1.5 × 0.00200 = 1.10010, target at 1.10310 + 2.5 × 0.00200 = 1.10810.

Parameters

Parameter	Default	Description
ClusterWindow	`6`	How many completed bars before the escape bar form the balance pocket. Range 3–20, step 1.
MinSpinningTops	`3`	How many of those window bars must be spinning tops for a valid cluster. Range 2–12, step 1.
BodyRatioMax	`0.30`	Maximum body/range ratio for a candle to count as a spinning top (indecision). Range 0.10–0.50, step 0.05.
BreakoutBodyRatio	`0.55`	Minimum body/range ratio for the escape candle to count as decisive. Range 0.40–0.90, step 0.05.
BreakBufferAtr	`0.10`	Extra clearance required beyond the fence, as a fraction of ATR (anti-marginal-break). Range 0.0–1.0, step 0.05.
AtrPeriod	`14`	ATR period used for the buffer and for risk sizing. Range 5–30, step 1.
AtrStopMult	`1.5`	ATR multiple for the stop-loss distance. Range 0.5–4.0, step 0.5.
AtrTargetMult	`2.5`	ATR multiple for the take-profit distance. Range 0.5–6.0, step 0.5.
Lots	`0.10`	Trade volume in lots. Range 0.01–1.0, step 0.05.
Magic	`5321`	Magic number identifying this EA's positions (one open position per magic at a time).

Recommended Settings

The defaults are a balanced starting point on the H1 timeframe for major FX pairs. Adjust with the following guidance, always confirming on out-of-sample data before going live.

CLUSTER & INDECISION

- **ClusterWindow / MinSpinningTops** — a wider window (8–10) with a higher `MinSpinningTops` demands a more clearly established balance pocket, producing fewer but higher-conviction signals. Keep `MinSpinningTops` comfortably below `ClusterWindow` (e.g. 4 of 8).
- **BodyRatioMax** — lower it (0.20–0.25) to require tighter, more textbook spinning tops; raise it (0.35–0.40) to accept looser indecision and generate more setups.
- **BreakoutBodyRatio** — raise it (0.65–0.75) to demand a more convincing full-body escape; lower it toward 0.45 for earlier, more frequent triggers.

BREAKOUT CONFIRMATION & RISK

- **BreakBufferAtr** — increase toward 0.20–0.30 in noisy or wide-spread conditions to avoid marginal breaks; set to 0.0 only if you want to trade the exact fence.
- **AtrStopMult / AtrTargetMult** — the defaults (1.5 / 2.5) give roughly a 1.67 : 1 reward-to-risk ratio. Widen the stop on volatile pairs; widen the target only if the instrument trends persistently.
- **Lots** — size so that a full stop (1.5 × ATR) risks only a small, fixed fraction of account equity.

> **Timeframe.** The class is single-timeframe by design. H1 offers a good balance of signal frequency and reliability; M15 produces more setups (with more noise), while H4 yields fewer, cleaner breakouts. Backtest the parameter set on the exact symbol and timeframe you intend to trade.

How to Install on MetaTrader 5

1. Copy `SpinningTopClusterBreakout.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.