

Opening Range Breakout

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Breakout (Price-Action)	M15 — Intraday	www.algotbot.live

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Overview

Opening Range Breakout is a pure price-action, indicator-free breakout system. At the start of each new trading day it measures the high and low of the first few bars of the session — the "opening range" — the zone where the day's initial supply and demand balance is discovered. Once that range is fixed, the EA waits for a confirmed bar close beyond it (plus a small buffer) and trades in the direction of the break, treating it as evidence that one side has won the early auction.

Because the strategy uses no indicators, every decision is derived directly from price: the range box defines entries, and stops and targets are "measured moves" expressed as multiples of the range width. The EA permits at most one long and one short attempt per day, holds only a single position from its Magic number at any time, and runs on whatever timeframe the chart is set to — it is designed for intraday FX such as GBPUSD on the M15 timeframe.

How It Works

The EA operates in two distinct phases each trading day. A new day is detected directly from bar timestamps, and all state is reset whenever the calendar day changes. The strategy only ever acts on **confirmed, fully-**

closed bars: it evaluates the bar at shift 1 once a fresh bar has begun forming, so signals are never based on an incomplete candle.

Phase 1 — Building the Opening Range

- For the first `RangeBars` closed bars of each new day, the EA records the running highest high (`_orHigh`) and lowest low (`_orLow`).
- When exactly `RangeBars` bars have accumulated and the high is above the low, the range is marked **ready** and the box is locked in for the rest of the day.
- The width of this box, `rangeWidth = _orHigh - _orLow`, becomes the single unit from which the buffer, stop, and target are all measured.

Phase 2 — Trading the Breakout

Once the range is ready, the EA watches each confirmed close against the box edges, expanded by a buffer of `BreakoutBufferPct × rangeWidth`:

- **Long entry:** a confirmed close above `_orHigh + buffer` opens a **Buy** at the current Ask. Only one long is allowed per day.
- **Short entry:** a confirmed close below `_orLow - buffer` opens a **Sell** at the current Bid. Only one short is allowed per day.
- A new position is only opened when there is no existing position for this symbol carrying the EA's Magic number.

Stop Loss & Take Profit

Both exits are fixed at entry as measured moves of the range width — there is no trailing stop or break-even logic:

```
rangeWidth = orHigh - orLow
buffer      = BreakoutBufferPct * rangeWidth

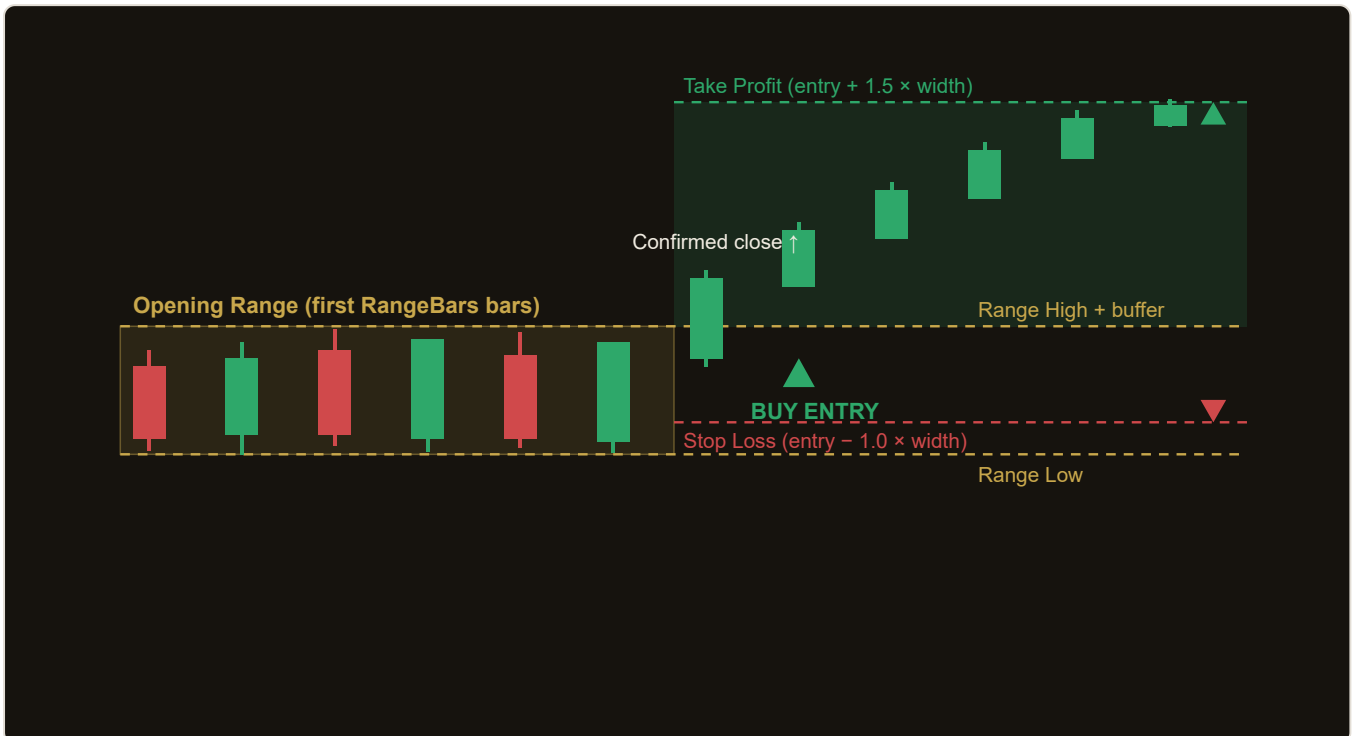
Long:  SL = entry - SlRangeMultiple * rangeWidth
       TP = entry + TpRangeMultiple * rangeWidth

Short: SL = entry + SlRangeMultiple * rangeWidth
       TP = entry - TpRangeMultiple * rangeWidth
```

Note: With the defaults (`TpRangeMultiple = 1.5` , `SlRangeMultiple = 1.0`) each trade risks one range-width to target one-and-a-half, a reward-to-risk of roughly 1.5 : 1. Because the stop and target scale with the day's measured volatility, the EA risks more in wide-range sessions and less in quiet ones without any extra configuration.

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.

Walk-through of the illustration

The first six bars of the day oscillate inside the gold box, defining the opening range. The seventh bar closes decisively above the range high plus the buffer — a confirmed long breakout. The EA buys at the next Ask; the take-profit sits 1.5 range-widths above entry and the stop 1.0 range-width below. Price runs into the green continuation zone and reaches the target.

Parameters

Parameter	Default	Description
RangeBars	6	Number of bars after each new day that form the opening-range box. Integer, range 2–24, step 1.
BreakoutBufferPct	0.08	Breakout confirmation buffer beyond the range, expressed as a fraction of the range width. Range 0.0–0.5, step 0.02.
TpRangeMultiple	1.5	Take-profit distance as a multiple of the range width (measured move). Range 0.5–4.0, step 0.5.
SlRangeMultiple	1.0	Stop-loss distance as a multiple of the range width. Range 0.3–2.0, step 0.1.
Lots	0.10	Order volume in lots for each trade. Range 0.01–1.0, step 0.05.
Magic	5071	Magic number identifying this EA's positions, so it manages only its own trades.

Recommended Settings

The strategy is designed for liquid intraday FX. The defaults are a sensible starting point; tune them to the symbol and session you trade after your own backtesting.

- **Symbol:** Major FX pair with a clean intraday session, e.g. GBPUSD or EURUSD.
- **Timeframe:** M15 — with `RangeBars = 6` this builds the opening range from the first 90 minutes of the session.
- **RangeBars:** 6 for M15; raise it on lower timeframes to keep a comparable range-building window.
- **BreakoutBufferPct:** 0.08 filters minor pokes through the edge; increase it on choppy symbols to demand a more convincing break.
- **TP / SL multiples:** 1.5 / 1.0 give a ~1.5 : 1 reward-to-risk. Widen the SL multiple for noisier instruments.
- **Lots:** Size so that a stop of `SlRangeMultiple × rangeWidth` stays within your per-trade risk budget.

Tip: Because the EA detects the trading day from bar timestamps (UTC), align your broker/chart time and the `RangeBars` count so the opening range covers the session open you actually want to trade.

How to Install on MetaTrader 5

- 1 Copy `OpeningRangeBreakout.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

Backtesting: In the MT5 Strategy Tester, select `OpeningRangeBreakout`, choose your symbol and the M15 timeframe, and use "Every tick based on real ticks" for the most realistic fills. The EA acts only on confirmed bar closes, so results are consistent across tick models.

Risk Warning

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