KASE BARS FOR NINJATRADER

KASE AND COMPANY, INC.

JULY 2025

Kase Bars

Kase Bars are equal True Range bars previously known as Kase Universal Bars. The Kase Bar method creates bars based on an input True Range target by the user, such as 10 cents, 20 points, etc., and uses only real price data. Kase Bar charts look like traditional bar or candlestick charts except that, because the size of each bar is dictated by a target range, the bars are all approximately the same size (range).

Kase Bars are superior to other range bar methods in two ways. First, the bars are equal true range, which counts any gaps between the previous bar's close and the current high or low into the bar's range – as opposed to simple range bars, which only account for the high-low range and leave out any gaps. Second, Kase Bars use only real data to form bars. Thus, if there are any gaps on the chart, those gaps are shown, as opposed to filling the gap by creating bars using fake or ghost data. Furthermore, if the minimum range between two ticks exceeds the target range, the actual minimum range is shown. This is in opposition to range bar methods, which force bars to the exact target by inserting fake data. For example, if two sequential prices were $10.1 and $10.2, Kase's method, using a 5-cent range, does not put in fake data but would generate a 10-cent bar, since that is as close to the target as one can get with real data. Other methods would insert a false tick at 10.15 to break up the 10-cent bar into two 5's.

Thus, the user can be assured of three things:

1) Real market gaps will be displayed, such as breakaway, measuring, midpoint, and exhaustion gaps which are important in anticipating market behavior, as well as patterns such as morning and evening stars and island reversals.
2) Any signals generated by indicators will be generated by real data, as opposed to fake data, which, by definition, would generate a fake signal, and potentially an erroneous one. This is especially important in back testing because, while in a back test, a trade entry or exit might be triggered at a point when fake data was being used. In real life, since those prices did not trade, no action could have been taken.
3) Because gaps are not filled in and bars are not broken up with fake data, the real risk in the market, which is proportional to the real range of what traded, will not be masked, potentially lulling the user into employing incorrect stops that trigger retroactively.

How Are Kase Bars Built

Ideally, Kase Bars are built using 1-tick bar data. As each tick is fed in, the True Range of the current bar is measured. Once the user-input **Target Range** (see Figure 1 on page 2) is met, or given the data, is met as closely as possible, the bar is closed and a new bar is opened on the next tick.

However, due to limitations of historical tick data, one may also choose to build the Kase Bars using time or volume bars. It is highly recommended that 1-minute bars be used. The Kase Bars algorithm using time or volume bars is the same as using tick data. The only challenge is that once the target range has been met or exceeded, the algorithm must wait for the current time or volume bar to close before opening a new Kase Bars. This could lead to bars that have a larger True Range than the **Target Range** input.

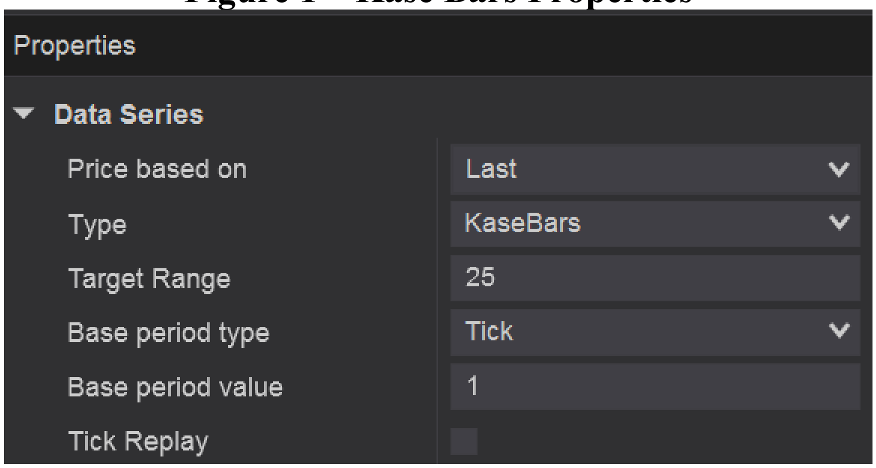
In NinjaTrader, the type of bar used to build the Kase Bars is chosen by the **Base period type** and the **Base period value** (see Figure 1 on page 2). A **Base period type** of Tick and a **Base period value** of 1 will use 1-tick bars to build the Kase Bars. A **Base period type** of Minute and a **Base period value** of 1 will use 1-minute bars to build the Kase Bars.

Setting The Target Range

The **Target Range** is the primary input for the Kase Bars. The **Target Range** is used to determine the size of the Kase Bars that will be plotted on the chart.

In NinjaTrader, the **Target Range** is based upon the minimum tick size of the instrument that is being charted. For instance, if WTI Crude Oil (symbol CL) is being charted and the Target Range is set to 25, a $0.25 Kase Bar chart will be charted because the minimum tick size for CL is $0.01.

Figure 1 – Kase Bars Properties



Below are examples of the calculated True Range based on the **Target Range** for various instruments based upon the minimum tick size. The True Range is automatically calculated in the algorithm of the Kase Bars on NinjaTrader.

Instrument	Minimum Tick Size	Target Range	True Range
CL	$0.01	25	$0.25
NG	$0.001	25	$0.025
ES	$0.25	25	$6.25
YM	$1.00	25	$25.00
AAPL	$0.01	25	$0.025

Choosing A Target Range

As a guideline, the target range should be no less than three times the average difference between ticks. So, for example, if a typical tick chart looked like this “10 – 12 – 14 – 12 – 14 – 16”, then the average tick difference is “2” and the minimum range one would use is “6”.

There are a couple of ways to choose the Target Range:

1) Set up the normal chart you would use, such as 15 minute, 30 minute, or 610 tick, etc. Plot the Average True Range on that chart. Whatever the ATR is of the chart you normally use should be roughly equal to the “Target Range” you choose to input.
2) You can always choose a range that seems appropriate to you. Visually, the bars should look about the same size. If there is a large variation, it usually means that the target range you have set is too small.

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