

Algorithmic Order Guide



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SUPPORTED MARKETS

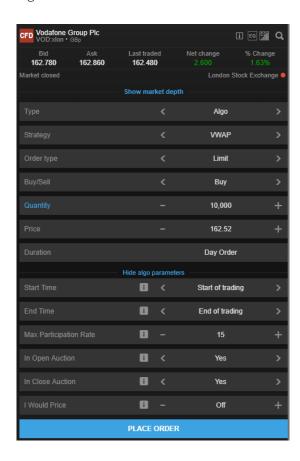
APAC	
HONG KONG	
JAPAN	
AUSTRALIA	
SINGAPORE	
EMEA	
AUSTRIA	
BELGIUM	
DENMARK	
FINLAND	
FRANCE	
GERMANY	
IRELAND	
ITALY	
NETHERLANDS	
NORWAY	
PORTUGAL	
SOUTH AFRICA	
SPAIN	
SWEDEN	
SWITZERLAND	
UNITED KINGDOM	
NORTH AMERICA	
UNITED STATES	
CANADA	

VWAP

VWAP works an order over a user-specific time interval, attempting to match or beat the Volume-Weighted Average Price (VWAP) for that time interval. The order is executed proportionally with the expected market based on historical volume distribution. Since the VWAP is executed according to the expected market volume the strategy should not be used on days where the actual market volume is deviating significantly from the normal historic market volume.

KEY CONSIDERATIONS:

Volume moving sharply away from historical distribution, e.g. unexpected company news will likely result in higher deviation from VWAP benchmark.



PARAMETER OPTIONS:

- Limit Price (Optional)
- Start / End Time (Optional):

If not specified, start and end times are by default set to market open and market close, respectively. Start and end times are defined in local exchange time.

■ Max Participation Rate (Recommended):

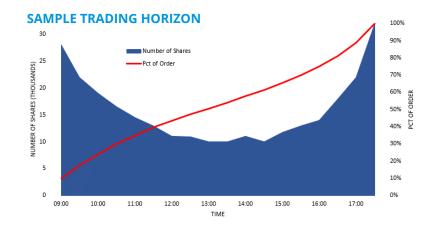
Ability to place constraint on the maximum percentage of trade volume in which the order should participate.

■ In Open / In Close Auction (Optional):

The user can decide to not participate in opening and/or closing auctions. If not specified these are by default set to include auctions

■ I Would Price (Optional):

Attempts to complete or trade up to the price specified. Within this price the order can be up to 100% of trade volume.

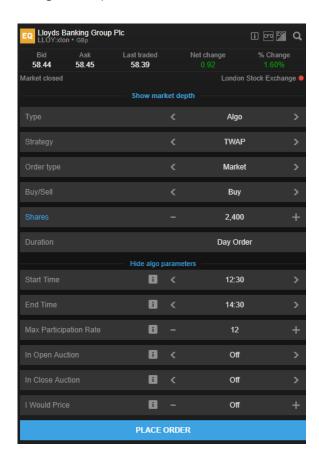


TWAP

TWAP will trade linearly over the specified time period. The strategy aims to trade evenly throughout the period regardless of volume while reducing market impact and attempting to maximize anonymity.

KEY CONSIDERATIONS:

During unpredictable spikes in volume liquidity might be missed and during low volume periods the order could be significant part of the traded volume.



PARAMETER OPTIONS:

- Limit Price (Optional)
- Start / End Time (Optional):

If not specified, start and end times are by default set to market open and market close, respectively. Start and end times are defined in local exchange time.

■ Max Participation Rate (Recommended):

Ability to place constraint on the maximum percentage of trade volume in which the order should participate.

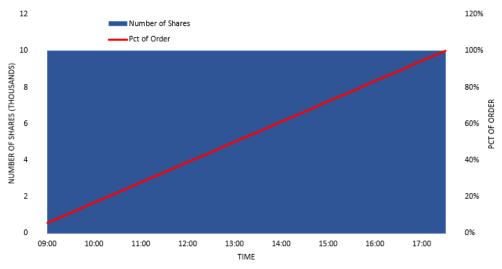
■ In Open / In Close Auction (Optional):

The user can decide to not participate in opening and/or closing auctions. If not specified these are by default set to include auctions.

■ I Would Price (Optional):

Attempts to complete or trade up to the price specified. Within this price the order can be up to 100% of trade volume.

SAMPLE TRADING HORIZON

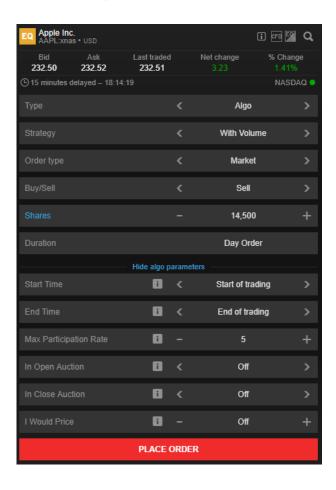


WITH VOLUME

With Volume trades in proportion with actual market activity targeting the participation at a user specified percentage of overall traded volume. The strategy is suited when the trader wants to directly control their participation rate and/or be more involved when the stock is trading heavily. As the strategy trades in proportion with actual market volume it is more suited for stocks whose trading volume varies substantially from a day to day basis.

KEY CONSIDERATIONS:

With Volume does not guarantee completion if there is low liquidity and may fill early if there is high liquidity. Participation in a volume spike could lead to large volume execution around an event which offers un-favourable price.



PARAMETER OPTIONS:

- Limit Price (Optional)
- Start / End Time (Optional):

If not specified, start and end times are by default set to market open and market close, respectively. Start and end times are defined in local exchange time.

■ Max Participation Rate (Mandatory):

The percentage of trade volume in which the order should participate.

■ In Open / In Close Auction (Optional):

The user can decide to not participate in opening and/or closing auctions. If not specified these are by default set to include auctions.

■ I Would Price (Optional):

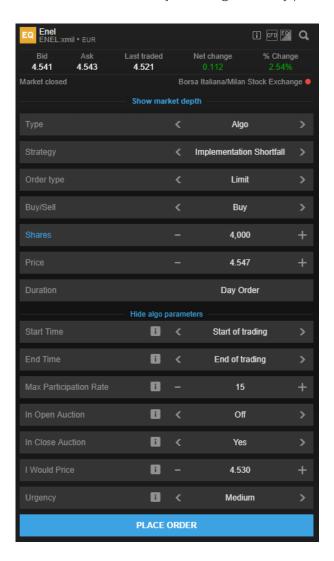
Attempts to complete or trade up to the price specified. Within this price the order can be up to 100% of trade volume.

IMPLEMENTATION SHORTFALL

Implementation Shortfall aims to optimize the time of trading to minimize the combination of price impact and the risk of potential price movement. The optimization considers the current marketplace and stock-specific trading characteristics as well as the size of the order. The order is executed in line with the expected volume profile. Higher urgencies trade faster at the beginning to maximize liquidity capture at the current price, whereas low urgency will prioritize to minimize market impact while taking more execution risk.

KEY CONSIDERATIONS:

Should be avoided on days with high volatility periods or when volume distribution is uncertain.



PARAMETER OPTIONS:

- **■** Limit Price (Optional)
- Start / End Time (Optional):

If not specified, start and end times are by default set to market open and market close, respectively. Start and end times are defined in local exchange time.

■ Max Participation Rate (Recommended):

Ability to place constraint on the maximum percentage of trade volume in which the order should participate.

■ In Open / In Close Auction (Optional):

The user can decide to not participate in opening and/or closing auctions. If not specified these are by default set to include auctions.

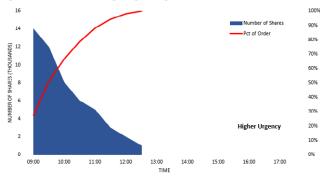
■ I Would Price (Optional):

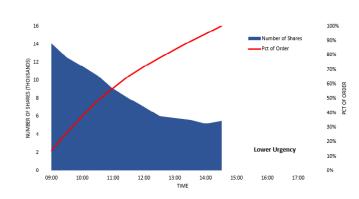
Attempts to complete or trade up to the price specified. Within this price the order can be up to 100% of trade volume.

■ Urgency (Mandatory)

Based on the urgency chosen the algorithm determines the optimal trading horizon. Higher urgencies trade faster at the beginning to maximize liquidity capture at the current price, whereas low urgency will prioritize to minimize market impact while taking more execution risk.







LIQUIDITY SEEKING

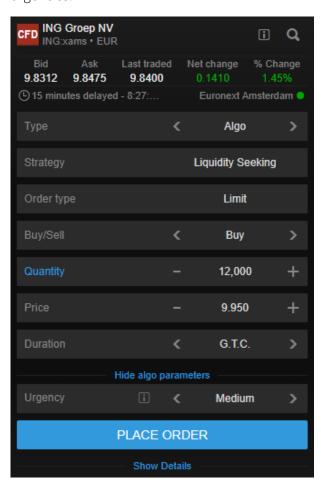
Strategy intelligently seeks liquidity across lit, hidden, dark/periodic and conditional venues. The strategy uses hidden orders to disguise its intentions from the market.

Within the order limit price the strategy will trade opportunistically against displayed liquidity and periodically sweep selected non-displayed venues, post in conditionals and seek block fills.

The urgency parameter controls the aggressiveness of the strategy.

KEY CONSIDERATIONS:

When trading illiquid stocks the strategy may continually pay the spread when executing using the higher urgencies.



PARAMETER OPTIONS:

- Limit Price (Mandatory)
- Urgency (Mandatory)

Low: Is a passive urgency that will not cross the spread to take the displayed quote. A low urgency strategy will send only dark and hidden orders.

Medium: Executes against the displayed quote whilst interacting with dark and hidden order books. In medium urgency the strategy will use IOC, hidden and dark order types.

When within the order limit price, a medium urgency strategy will periodically cross the spread to take a portion of the displayed liquidity whilst attempting to minimize market impact.

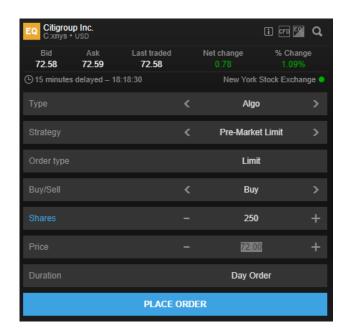
High: Executes to capture maximum liquidity whilst attempting to balance the effects of market impact. When within the order limit price, a high urgency strategy will aggressively seek liquidity and frequently cross the spread to take all of the far-side displayed liquidity. In high urgency the strategy will use IOC, hidden and dark order types.

For high urgency a tighter limit price is recommended.

PRE-MARKET LIMIT

Available for CFDs and Cash Shares on US Single Stocks and ETPs.

The order will participate in the pre-market from 7:00am, and any residual will be rolled into the continuous session as regular limit order at the same limit price.



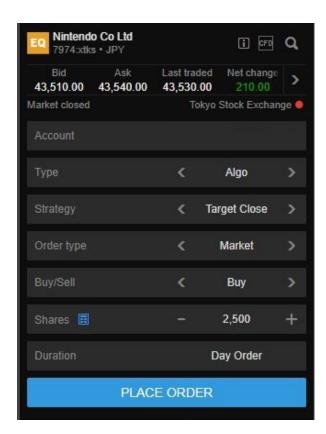
PARAMETER OPTIONS:

Target Close

Target Close attempts to target the closing auction price whilst balancing market impact and benchmark risk of trading before the closing auction.

For orders large relative to the predicted closing auction volume, the strategy will create a pre-auction trajectory to trade any excess volume leading up to the closing auction.

Otherwise the order will be fully routed into the closing auction.



KEY CONSIDERATIONS:

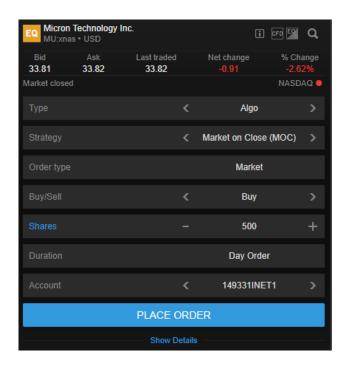
Larger orders may deviate from the closing auction price due to pre-auction trading

PARAMETER OPTIONS:

MARKET ON CLOSE (MOC)

Available for CFDs and Cash Shares on North American and European Single Stocks and ETPs*.

An order that will execute as close as possible to the closing price.



NORTH AMERICAN EXCHANGE CUTOFF TIMES:

- NYSE 15:50 EST
- NASDAQ 15:50 EST
- NYSE ARCA 15:59 EST
- AMEX 15:50 EST
- IEX 15:50 EST
- BATS 15:55 EST
- Toronto / TSX 15:40 EST

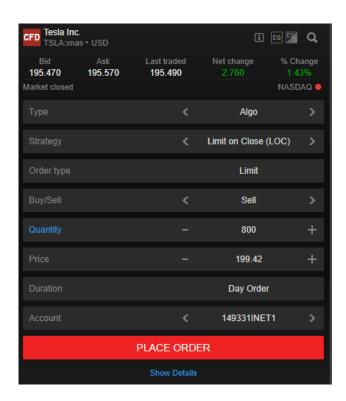
Orders cannot be cancelled or modified after the cutoff times.

^{*)}MOC not available in Spain, as order type is not natively supported by the exchange

LIMIT ON CLOSE (LOC)

Available for CFDs and Cash Shares on North American and European Single Stocks and ETPs*.

An order that will execute if the closing price is within the order limit price.



PARAMETER OPTIONS:

■ Limit Price (Mandatory)

NORTH AMERICAN EXCHANGE CUTOFF TIMES:

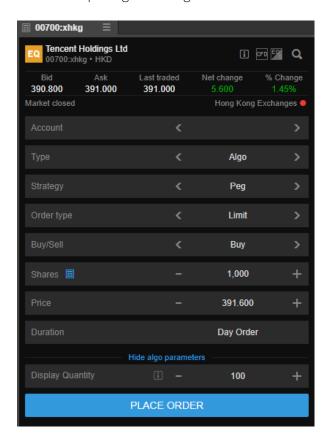
- NYSE 15:50 EST
- NASDAQ 15:50 EST
- NYSE ARCA 15:59 EST
- AMEX 15:50 EST
- IEX 15:50 EST
- BATS 15:55 EST
- Toronto / TSX 15:40 EST

Orders cannot be cancelled or modified after the cutoff times.

^{*)}LOC not available in Spain, as order type is not natively supported by the exchange

PEG

Peg is designed to maintain a dynamic, but passive slice on the order book that moves in relation to the market spread. It's a passive trading strategy that is intended to minimize market impact while maximize spread capture. The strategy is configured to always peg against near touch and does not participate in either the opening or closing auctions.

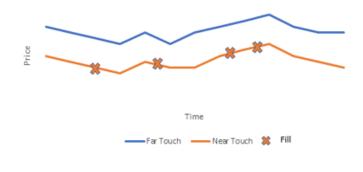


PARAMETER OPTIONS:

■ Display Quantity (Optional):

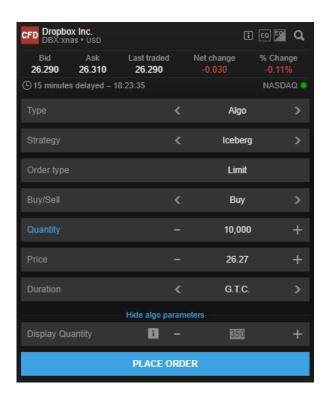
Quantity of shares displayed on the exchange at any given time. Please be aware of exchange specific rules for minimum display size.

■ Limit Price (Optional)



ICEBERG

Iceberg orders are sent only to the primary exchange where only the specified quantity of the total is shown at any given time.



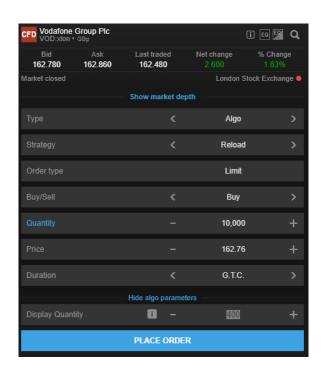
PARAMETER OPTIONS:

■ Display Quantity (Mandatory):

Quantity of shares displayed on the exchange at any given time. Please be aware of exchange specific rules for minimum display size.

RELOAD

The reload strategy trades the order in tranches of a given size, entering a new tranche every time the previous one is filled. The strategy will place limit orders at the given price and size of the Display Quantity. The tranches are smart order routed across multiple venues which is the main difference from a native Iceberg order.



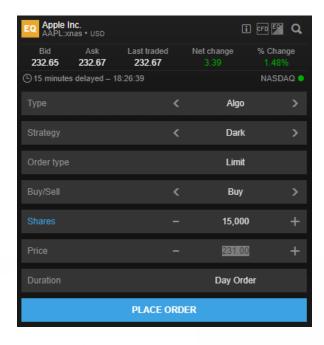
PARAMETER OPTIONS:

■ Display Quantity (Mandatory):

Quantity of shares displayed on the exchange at any given time. Please be aware of exchange specific rules for minimum display size.

DARK

Order posted to dark venues only.



PARAMETER OPTIONS:

