

Covert- Dark Only

Seeks dark only liquidity across a network of non-displayed liquidity pools. An optional anti gaming feature is designed to pause during market conditions that it recognises as adverse. Covert will not post shares on displayed venues or take a displayed quote.

Works best when: Intelligently accessing dark liquidity

Trading Scenario: Buy 100 000 NHY NO at lim 40,25 and never pay more than mid-price at any given time. Minimum fill you will accept is 10 000 shs.



Orders	ΣB Size	Bid	Ask	ΣA Size	Orders
11	2 802	40,240	40,270	9 662	12
4	3 322	40,230	40,280	12 337	13
18	15 719	40,220	40,290	11 137	10
13	13 084	40,210	40,300	14 821	15
13	13 512	40,200	40,310	12 852	11

Volume (1): 100 000
Strategy: COVERT-Dark Only
Portfolio: 2150
Price: 40,250
Type*: Limit
Validity*: Day
Start Time: 13:05:52
End Time: 13:05:52
Style: Neutral
Min Dark Fill Qty: 10 000
10B_10: False
Service*: PRTO

Style

1. "BLANK" – if this field is not populated, PRTO will apply the default style of NEUTRAL.
2. "AGGRESSIVE" – happy to pay the spread if order is marketable
3. "NEUTRAL" – order will stay pegged to the mid-point.
4. "PASSIVE" – order will stay pegged to the near side touch.

Minimum Quantity – set a minimum execution quantity (optional field)

POV

Dynamically anticipates and reacts to traded volume to aim to keep the order in line with a specified participation rate.

Works best when: Targeting a preferred participation rate

Trading Scenario: Buy 50 000 STL NO @ mkt and work 10% of the public traded volume. You can passively trade slightly ahead of the traded volume, but not greater than 11%. On the other hand don't fall behind less than 9% of the displayed volume.



Orders	ΣB Size	Bid	Ask	ΣA Size	Orders
1	513	139,500	139,600	23 171	42
27 (1)	16 183	139,400	139,700	32 030	37
34	19 877	139,300	139,800	24 633	37
36	20 507	139,200	139,900	41 853	41
37	28 258	139,100	140,000	14 916	23

Start Time: Time from which order will begin. If not specified, order will begin at the open or immediately if sent during continues trading.

End Time: Time at which the order will stop working. If not specified, order will continue until the close of continues trading.

Target POV: Target % of volume

I would price: a level at which you are happy to complete the order if the price becomes marketable.

On Open:

1. "Blank" - if this field is not populated, PRTO will apply the default option no
2. "Yes" - order will participate in the open auction
3. "No" - order will not participate in the open auction *

On close:

1. "Blank" - if this field is not populated, PRTO will apply the default option no
2. "Yes" - order will participate in the closing auction
3. "No" - order will not participate in the closing auction

TWAP

Works to execute order evenly between specified start and stop times while attempting to hold the market impact to a minimum.

Works best when: Executing an order over a specified time frame

Trading Scenario: Buy 50 000 STL NO @ mkt spread evenly through the day including closing auction.



The screenshot shows the Pareto FIX Trading interface for a new order. The order is for STL - Statoil with a volume of 50,000. The strategy is TWAP-PRTO. The order is set to execute from 13:08:55 to 13:08:56. The order type is Market, and the validity is Day. The order is set to participate in the open auction (On Open: Yes) and the closing auction (On Close: Yes). The service is PRTO. The order is set to buy at the market spread.

Orders	ΣB Size	Bid	Ask	ΣA Size	Orders
15	8 410	139,200	139,300	11 751	21
41	30 511	139,100	139,400	18 634	35
31	18 431	139,000	139,500	20 942	36
30	16 693	138,900	139,600	21 044	38
25	30 459	138,800	139,700	31 404	36

Start Time: Time from which order will begin. If not specified, order will begin at the open or immediately if sent during continues trading.

End Time: Time at which the order will stop working. If not specified, order will continue until the close of continues trading.

Max Vol %: Maximum participation rate – note, we will track consolidate EU volume.

I would price: a level at which you are happy to complete the order if the price becomes marketable.

On Open:

1. “Blank” – if this is not populated, PRTO will apply the default option no
2. “Yes” - order will participate in the open auction
3. “No” – order will not participate in open auction

On close:

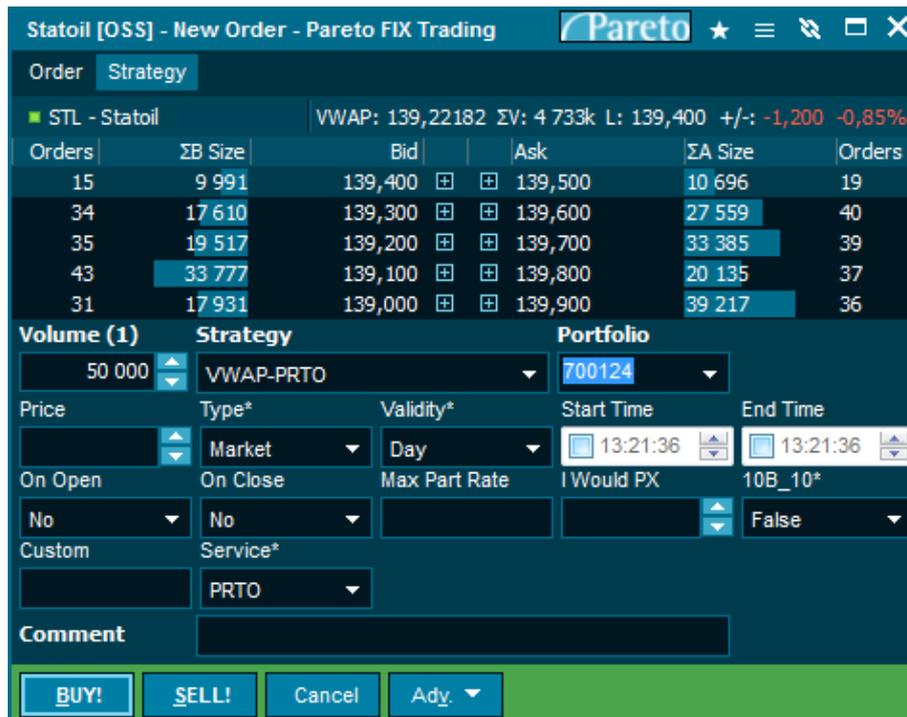
1. “Blank” - if this field is not populated, PRTO will apply the default option no
2. “Yes” – order will participate in the closing auction
3. “no” – order will not participate in the closing auction.

VWAP

Seeks to minimise slippage against a targeted volume-weighted average price during a specified time interval while balancing the need to minimise impact. Uses data analysis to predict volume trends and maximise performance

Works best when: Executing an order over a specified time frame

Trading Scenario: Buy 50 000 STL NO @ mkt spread through the day targeting the volume weighted average price, excluding auction.



Start Time: Time from which order will begin. If not specified, order will begin at the open or immediately if sent during continues trading.

End Time: Time at which the order will stop working. If not specified, order will continue until the close of continues trading.

Max Vol %: Maximum participation rate – note, we will track consolidate EU volume.

I would price: a level at which you are happy to complete the order if the price becomes marketable.

On open:

1. "Blank" – if this is not populated, PRTO will apply the default option no
2. "Yes" – order will participate in the open auction
3. "No" – order will not participate in the closing auction

On Close:

1. "Blank" – if this is not populated, PRTO will apply the default option no
2. "Yes" – order will participate in the open auction
3. "No" – order will not participate in the closing auction

Smart Anonym

Smart Order Router: Execution using low-latency technology to access liquidity from the marketplace. Users can configure multiple settings to access displayed and non-displayed liquidity based on their preference for potential price improvement or liquidity.

Works best when: Adding or liquidating a position at a specific price point



Norsk Hydro [OSS] - New Order - Pareto FIX Trad...

Order Strategy

■ NHY - Norsk Hydro VWAP: 40,42323 ΣV: 11m L: 40,190 +/-: 0,780 1,98%

Orders	ΣB Size	Bid	Ask	ΣA Size	Orders
1	710	40,200	40,210	2 964	4
10	16 064	40,190	40,220	5 561	8
6	5 611	40,180	40,230	10 622	13
12	14 584	40,170	40,240	15 346	16
13	12 823	40,160	40,250	13 599	13

Volume (1) Strategy Portfolio

10 000 SMART-Anonym 2150

Price Type* Validity* Service*

40,21 Limit Day PRTO-HIDE

Comment

BUY! SELL! Cancel Adv.

Oasis

Utilises innovative liquidity-sourcing logic to skilfully handle variable volume, heightened volatility, and price sensitivities, including those typically encountered when trading thin and difficult trade names. Oasis is not schedule-driven and can vary the realised participation rate, it trades at times it sees optimal, pausing during conditions it recognises as adverse. Oasis trades in displayed and non-displayed venues, however to reduce signalling risk, will not post in displayed venues.

Works best when: Liquidity sourcing in small-, mid-, and large –cap stocks

Trading Scenario: Buy 75 000 PGS NO. Avoid impacting the supply/demand characteristics of the spread by only accessing the most probable dark pools and do not display my interest in the public quote. Closely monitor the spread for abnormal activity and take appropriate action and reenter the market when conditions



Orders	ΣB Size	Bid	Ask	ΣA Size	Orders
5	7 543	26,460	26,530	3 823	4
5	5 646	26,450	26,540	2 843	4
8	7 897	26,440	26,550	2 133	3
5	6 062	26,430	26,560	1 056	1
4	4 196	26,420	26,570	5 448	4

Volume (1) 75 000 | **Strategy** OASIS | **Portfolio** 2150
Price | **Type*** Market | **Validity*** Day | **Start Time** 13:13:52 | **End Time** 13:13:52
Style Neutral | **Max Part Rate** | **I Would PX** False | **10B_10*** | **Custom**
Service* PRTO
Comment

Start Time: Time from which order will begin. If not specified, order will begin at the open or immediately if sent during continues trading.

End Time: Time at which the order will stop working. If not specified, order will continue until the close of continues trading.

Style: Determines how aggressive the strategy is in both lit and dark .

Max Vol %: Maximum participation rate – note, we will track consolidate EU volume.

I would price: a level at which you are happy to complete the order if the price becomes marketable.

Catch

Catch is a liquidity-seeking algorithm that tries to trade as soon as possible, as long as it can limit market impact and adverse selection. And it aims to capture micro alpha and reduce the cost of trading in the process.

Works best when: Seeking liquidity, but needs to be conscious of market impact and adverse selection. Planning to participate opportunistically and get sooner done if liquidity is available.



Orders	ΣB Size	Bid	Ask	ΣA Size	Orders
3	2 661	46,570	46,600	2 859	4
5 (1)	5 276	46,560	46,610	2 153	2
7	2 937	46,550	46,620	5 514	9
5	3 397	46,540	46,630	2 388	5
4	2 019	46,530	46,640	2 178	3

Volume (1): 100 000
Strategy: CATCH
Portfolio: 2150
Price: []
Type*: Market
Validity*: Day
Start Time: 13:32:41
End Time: 13:32:41
Style: Neutral
Max Part Rate*: 25
Service*: PRT0
Comment: []

Start Time: Time from which order will begin. If not specified, order will begin at the open or immediately if sent during continues trading.

End Time: Time at which the order will stop working. If not specified, order will continue until the close of continues trading.

Style: Determines how aggressive the strategy is in both lit and dark .

Max Vol %: Maximum participation rate – note, we will track consolidate EU volume.

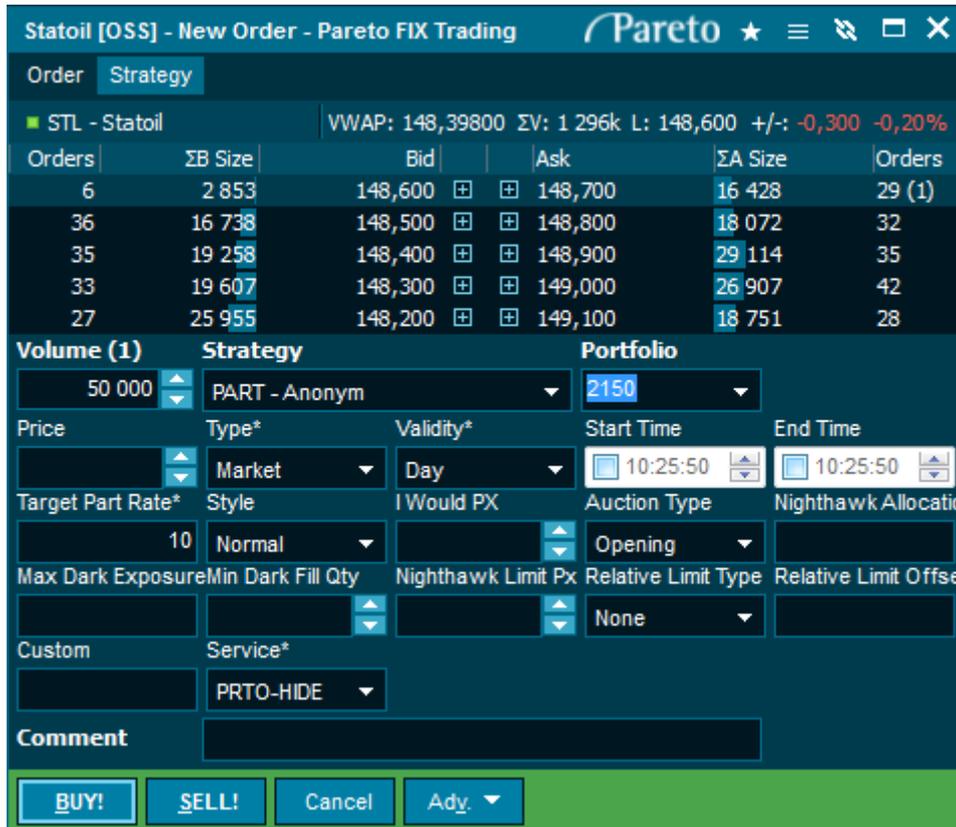
I would price: a level at which you are happy to complete the order if the price becomes marketable.

Part-anonym

The Part strategy trades anonymously as a targeted percentage of market volume. Use the Part strategy when you want to participate in the market at a specified level of trading volume.

Works best when: Targeting a preferred participation rate

Trading Scenario: Buy 50 000 STL NO @ mkt and work 10% of the public traded volume.



The screenshot shows the 'New Order' window for 'STL - Statoil' in the Pareto FIX Trading system. The window is divided into several sections:

- Market Data:** Shows VWAP: 148,39800, ΣV: 1 296k, L: 148,600, +/-: -0,300 -0,20%. Below this is a table of orders with columns for Orders, ΣB Size, Bid, Ask, ΣA Size, and Orders.
- Order Details:** Volume (1) is set to 50 000. Strategy is 'PART - Anonym'. Portfolio is '2150'.
- Execution Parameters:** Price is blank, Type* is 'Market', Validity* is 'Day', Start Time is '10:25:50', and End Time is '10:25:50'. Target Part Rate* is '10', Style is 'Normal', I Would PX is blank, Auction Type is 'Opening', and Nighthawk Allocatio is blank.
- Advanced Settings:** Max Dark Exposure, Min Dark Fill Qty, Nighthawk Limit Px, Relative Limit Type (set to 'None'), and Relative Limit Offse are all blank.
- Service:** Custom is blank, Service* is 'PRTO-HIDE'.
- Buttons:** At the bottom, there are buttons for 'BUY!', 'SELL!', 'Cancel', and 'Adv.'.

Start Time: Time from which order will begin. If not specified, order will begin at the open or immediately if sent during continues trading.

End Time: Time at which the order will stop working. If not specified, order will continue until the close of continues trading.

Target Part Rate: Maximum participation rate – note, we will track consolidate EU volume.

Style: Execution style for the order

1. Normal (default)
2. Opportunistic, trades may deviate more from target volume in order to try to capture better prices and more liquidity
3. Strict, trades more closely to the desired participation rate.

I would price: a level at which you are happy to complete the order if the price becomes marketable.

Auction Type:

1. "Opening" – will trade in opening
2. "Closing" – order will participate in the closing auction
3. "All auctions" – order will not participate in all auctions
4. "none" - Will not participate in any of the auctions

Nighthawk Alloc (%): The percentage of the order to allocate to trading in the dark pools outside of the normal strategy profile.

Max Dark Exposure (%): The maximum percentage of the total allocation amount that the strategy would expose in the dark, trading at any given time. This applies only to trading in dark pools outside of the normal strategy profile.

Min Dark Fill Qty: The minimum quantity necessary to permit trading in the dark pools outside of normal strategy trading.

Nighthawk Limit Px: The limit to use when trading in the dark pools outside of the normal strategy profile.

Relative Limit Type: Relative limits set calculated or derived limit prices based on real-time market data. Strategies will use the most passive limit imposed between the relative and hard limits if both have been specified.

1. None – no relative limit price (default)
2. Arrival Price – uses the mid-point quoted price at the time of arrival as the limit.
3. AvgPxLim - Uses the average traded price from order start time to the least print as the limit.
4. LastPricLim – Uses the last print in the marketplace as the limit. With orders submitted before open, the last close price will be used.
5. RelReturnPNC – Calculates the limit as the return relative to the local market index at the current price vs previous nights close.
6. Relative Return - Calculates the limit as the return relative to the local market index at the current price vs the price at order arrival.
7. VWAP – Uses the interval volume weighted average price as the limit.

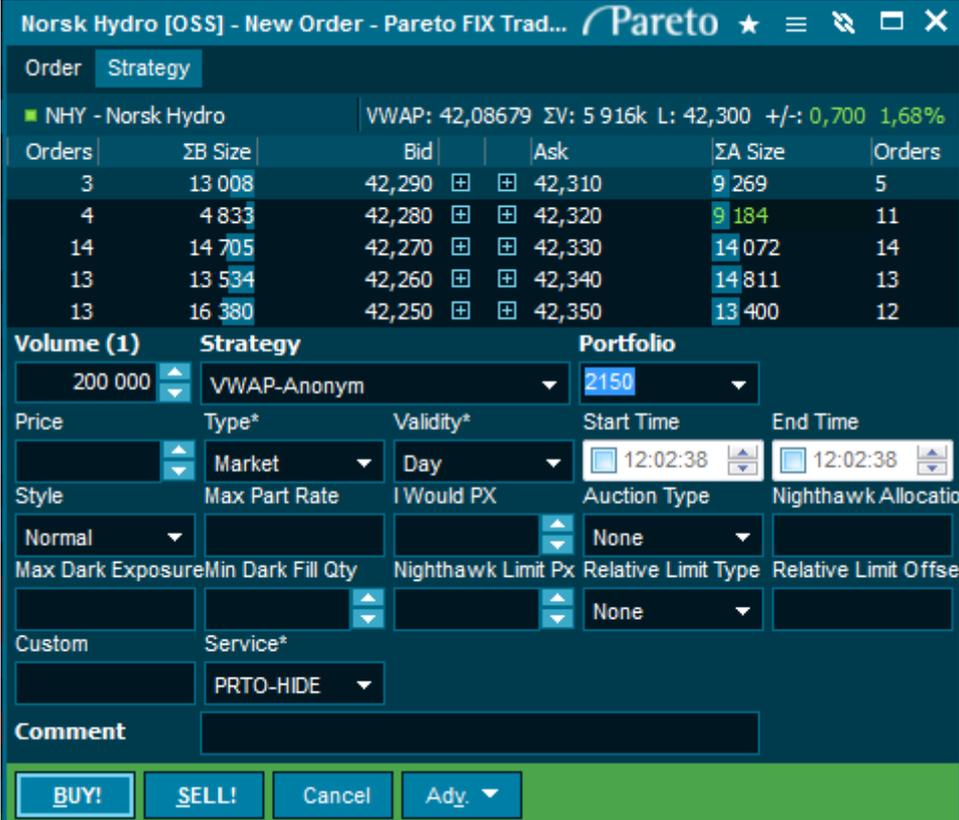
Relative Limit Offset (bps): The aggressive or passive basis point tolerance on the relative limit calculation.

VWAP Anonym

Seeks to minimise slippage against a targeted volume-weighted average price during a specified time interval while balancing the need to minimise impact. Uses data analysis to predict volume trends and maximise performance

Works best when: Executing an order over a specified time frame

Trading Scenario: Buy 200 000 NHY NO @ mkt spread through the day targeting the volume weighted average price, excluding auction.



Norsk Hydro [OSS] - New Order - Pareto FIX Trad...

Order Strategy

■ NHY - Norsk Hydro VWAP: 42,08679 ΣV: 5 916k L: 42,300 +/-: 0,700 1,68%

Orders	ΣB Size	Bid	Ask	ΣA Size	Orders
3	13 008	42,290	42,310	9 269	5
4	4 833	42,280	42,320	9 184	11
14	14 705	42,270	42,330	14 072	14
13	13 534	42,260	42,340	14 811	13
13	16 380	42,250	42,350	13 400	12

Volume (1) Strategy Portfolio

200 000 VWAP-Anonym 2150

Price Type* Validity* Start Time End Time

Market Day 12:02:38 12:02:38

Style Max Part Rate I Would PX Auction Type Nighthawk Allocatio

Normal None

Max Dark ExposureMin Dark Fill Qty Nighthawk Limit Px Relative Limit Type Relative Limit Offse

None

Custom Service*

PRTO-HIDE

Comment

BUY! SELL! Cancel Adv. ▾

Start Time: Time from which order will begin. If not specified, order will begin at the open or immediately if sent during continues trading.

End Time: Time at which the order will stop working. If not specified, order will continue until the close of continues trading.

Target Part Rate: Maximum participation rate – note, we will track consolidate EU volume.

Style: Execution style for the order

4. Normal (default)
5. Opportunistic, trades may deviate more from target volume in order to try to capture better prices and more liquidity
6. Strict, trades more closely to the desired participation rate.

I would price: a level at which you are happy to complete the order if the price becomes marketable.

Auction Type:

5. "Opening" – will trade in opening
6. "Closing" – order will participate in the closing auction
7. "All auctions" – order will not participate in all auctions
8. "none" - Will not participate in any of the auctions

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Min Dark Fill Qty: The minimum quantity necessary to permit trading in the dark pools outside of normal strategy trading.

Nighthawk Limit Px: The limit to use when trading in the dark pools outside of the normal strategy profile.

Relative Limit Type: Relative limits set calculated or derived limit prices based on real-time market data. Strategies will use the most passive limit imposed between the relative and hard limits if both have been specified.

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10. AvgPxLim - Uses the average traded price from order start time to the least print as the limit.
11. LastPriceLim – Uses the last print in the marketplace as the limit. With orders submitted before open, the last close price will be used.
12. RelReturnPNC – Calculates the limit as the return relative to the local market index at the current price vs previous nights close.
13. Relative Return - Calculates the limit as the return relative to the local market index at the current price vs the price at order arrival.
14. VWAP – Uses the interval volume weighted average price as the limit.

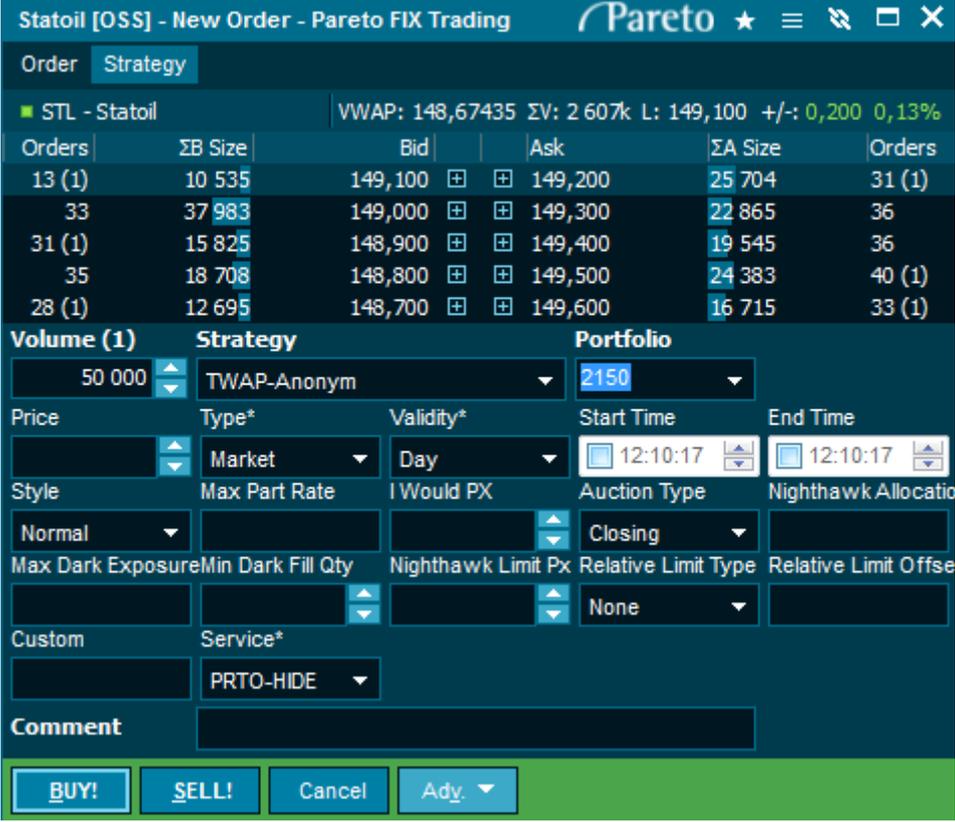
Relative Limit Offset (bps): The aggressive or passive basis point tolerance on the relative limit calculation.

TWAP Anonym

Works to execute order evenly between specified start and stop times while attempting to hold the market impact to a minimum and anonymity to a maximum.

Works best when: Executing an order over a specified time frame

Trading Scenario: Buy 50 000 STL NO @ mkt spread evenly through the day including closing auction.



Statoil [OSS] - New Order - Pareto FIX Trading

Order Strategy

STL - Statoil VWAP: 148,67435 ΣV: 2 607k L: 149,100 +/-: 0,200 0,13%

Orders	ΣB Size	Bid	Ask	ΣA Size	Orders
13 (1)	10 535	149,100	149,200	25 704	31 (1)
33	37 983	149,000	149,300	22 865	36
31 (1)	15 825	148,900	149,400	19 545	36
35	18 708	148,800	149,500	24 383	40 (1)
28 (1)	12 695	148,700	149,600	16 715	33 (1)

Volume (1) Strategy Portfolio

50 000 TWAP-Anonym 2150

Price Type* Validity* Start Time End Time

Market Day 12:10:17 12:10:17

Style Max Part Rate I Would PX Auction Type Nighthawk Allocatio

Normal Closing

Max Dark ExposureMin Dark Fill Qty Nighthawk Limit Px Relative Limit Type Relative Limit Offse

None

Custom Service* PRTO-HIDE

Comment

BUY! SELL! Cancel Adv.

Start Time: Time from which order will begin. If not specified, order will begin at the open or immediately if sent during continues trading.

End Time: Time at which the order will stop working. If not specified, order will continue until the close of continues trading.

Target Part Rate: Maximum participation rate – note, we will track consolidate EU volume.

Style: Execution style for the order

7. Normal (default)
8. Opportunistic, trades may deviate more from target volume in order to try to capture better prices and more liquidity
9. Strict, trades more closely to the desired participation rate.

I would price: a level at which you are happy to complete the order if the price becomes marketable.

Auction Type:

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Min Dark Fill Qty: The minimum quantity necessary to permit trading in the dark pools outside of normal strategy trading.

Nighthawk Limit Px: The limit to use when trading in the dark pools outside of the normal strategy profile.

Relative Limit Type: Relative limits set calculated or derived limit prices based on real-time market data. Strategies will use the most passive limit imposed between the relative and hard limits if both have been specified.

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21. VWAP – Uses the interval volume weighted average price as the limit.

Relative Limit Offset (bps): The aggressive or passive basis point tolerance on the relative limit calculation.