

# **FIX 4.2 Protocol Technical Specification**

March 2023  
Version 4.6.2



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## Version History

Version	Date	Comments
1.0	July 2013	Initial version
1.1	November 2013	150=H to 150=4 on Trade Cancel message
1.2	May 2014	No special handling for SenderSubID; Addition of accepted currency values on New Order Single messages; If using alternate symbology, Symbol is not mandatory; Use of OrigClOrdID in Execution Report
2.0	July 2014	Addition of Market at Close (MaC)
2.1	September 2014	Support Riskless Principal order capacity
2.2	March 2015	Addition of MaxFloor (111) to support iceberg orders; Options for Self-Trade Prevention; Update to MaC behaviour; Clarification of ClOrdID duplicate handling; Text (58) will be sent with a reason on unsolicited cancel Execution Reports
2.3	November 2015	Restatement message sent back when iceberg order refreshes on the book, carrying new market data order ID in SecondaryOrderID field
2.4	February 2016	Support for Post Only order type using tag PassiveOnlyOrder (27010)
2.5	April 2017	'Expired' order value added to execution report
3.0	November 2017	MiFID II fields included and updated (May 2017); Update to include POOR (Sept 2017); 20 Nov 2017 first trading day in Production
3.1	April 2018	Addition of LIS Cross & Benchmark Cross
3.2	July 2018	Addition of Auction on Demand
3.3	June 2019	Update to tag 30 values Addition of field Order Capacity (47) in Order Cancel/Replace Request messages for MaC orders Update to orderCapacity (47) in Execution Report
3.3.1	September 2019	Update to tag 2376 on New Order Single message from mandatory to optional Clarification of tag 59 on New Order Single message for AoD orders Update to reference document for Auction on Demand (2.9)
3.3.2	September 2019	Addition of Aquis Europe MICs
4.0	July 2020	Addition of Tag 880 in Execution Report Addition of Trade Bust Clarification of self-clearing behaviour in Clearing Configuration Correction of Tag 1 behaviour in Execution Report
4.1		Version reserved
4.2	September 2021	Update to Auction on Demand to include Pegged orders and Minimum Quantity Addition of field MinQty (110) to New Order Single message Update to AquisOrderAttribute (27010) and TimeInForce (59) in New Order Single Message Clarification of Trade Bust behaviour for Trade Capture Reports
4.3.1	May 2022	Addition of non-display order book functionality: Update to Self-Trade Prevention, New Order Single, Order Cancel/Replace Request and Execution Report Update to Self-Trade Prevention Correction of Tag 880 in Execution Report Clarified description of Tag 8013 in Execution Report

Version	Date	Comments
		Clarified description of DEA flag in New Order Single, Order Cancel Request and Execution Report.
4.4	June 2023	<p>Addition of Dark to Lit Sweep functionality: Updates to New Order Single. Update to allow modification of Price, Quantity and MinQty for AoD orders.</p> <p>Update April: Clarified Execution report behaviour for Dark to Lit Order Sweeps.</p> <p>Updated design of Specification in line with Aquis rebrand.</p> <p>Clarification of Tag 27010 on New Order Single</p> <p>Clarification of Tag 59 on New Order Single</p>
4.5	November 2023	<p>Addition of Restricted orders</p> <p>Addition of new AquisOrderAttribute values (5 and 6)</p> <p>Updates to Order Sweeps</p>
4.6.2	March 2023	Addition of Conditional IOIs

## 1 Introduction

This document describes the FIX 4.2-based implementation developed by Aquis Exchange (Aquis) to provide counterparties (direct trading Members or third-party vendors) with access to the Aquis MTF.

The document is intended to supplement the FIX protocol specification available at [www.fixprotocol.org](http://www.fixprotocol.org) by describing the message types, fields and values that are supported. Both necessary and optional parameters are identified, along with any specific usage and meaning adopted by Aquis.

This document should be read together with the Trading Platform Guide, which provides an overview of the services and functionality offered by Aquis.

### 1.1 Enquiries / Support

Please contact the Aquis Support team at [support@aquis.eu](mailto:support@aquis.eu) with any questions relating to this document.

## 2 Connectivity and Configuration

### 2.1 Network Connectivity

Aquis will provide trading Members (or their representatives) with IP address and port information to establish a TCP/IP connection for the trading session.

One or more connections will be provided to the Customer Test (CT) environment and, on successful certification, connection details to the primary and backup Production trading environments will be supplied. Connectivity options (co-location, leased line, extranet) should be discussed with the Aquis Networks team.

### 2.2 Trading Session Configuration

Aquis will agree *SenderCompID* / *TargetCompID* values with the counterparty to identify their trading session and to identify Aquis MTF as the intended trading venue. These fields are case-sensitive, with a maximum field size of 16 characters.

For Service Bureau connections, the trading Member identification is communicated via agreed *OnBehalfOfCompID* values.

These configuration fields are also case-sensitive, with a maximum field size of 16 characters.

### 2.3 Clearing Configuration

Before trading is permitted in any particular market, the trading Member must confirm that they have clearing arrangements in place with a nominated CCP. These choices are verified and set up by Aquis as part of the Member's trading configuration.

The Member may communicate on a per-order basis whether they wish for trades on a particular order to be allocated to the house account at the CCP or to a specific client account. This information is carried in the *Account* (1) field (see Section 5.1.1). Client account details should be established with the CCP involved, and verified with Aquis.

Members may request 'self-trade clearing suppression' from Aquis Support. With this configuration option, if a Member trades with themselves the trade is not submitted to a CCP for clearing. Instead, it is marked as a self-trade to be dealt with by the Member internally. This information is carried in the *ContraBroker* (375) field. For self-clearing to work, the *Order Capacity* (47) must be the same on both orders and the configured trading BIC for the sessions on either side should match.

## 2.4 Cancel on Disconnect

By default, all open orders are cancelled automatically if the trading Member ends their session or the connection drops. Note however that matched MaC orders are not cancelled if the connection drops after the MaC is locked.

If the Member does not want Cancel on Disconnect behaviour to apply, they should notify Aquis Support during the onboarding process.

## 2.5 Self-Trade Prevention

When a Member has multiple trading connections, Aquis offers the option for self-trade prevention to be configured across these trading sessions. This prevents a Member from trading with themselves by cancelling the resting order that would otherwise match.

- **Cancel Resting Order** – If an incoming (or price modified) order would trade with another order from that Member that is already on the Aquis order book, the existing resting order is automatically cancelled. The incoming order may trade with other orders, or is posted to the order book, as normal.

If required, self-trade prevention can be configured by the Aquis Support team to apply to the Member's trading sessions. It does not require any changes to the FIX messaging for order entry and order management.

When *OrdType* (40) = P, Members can also utilise *Internalisation* (9004) on New Order Single messages. If:

- 9004 = 0: The Order will ignore the configured self-trade prevention settings. When set, the Member's Order will not be prevented from matching with their other Orders.
- 9004 = 4: The Order will apply the Member's configured self-trade prevention settings. If the Order would trade with another resting order from that Member, the Member's resting order would not be cancelled. The resting Order would be discounted from the matching process.

## 2.6 Post-Only and Post-Only Cancel Replace Order Types

Please note that Members must have self-trade prevention enabled in order for the PO/PCR order type to function correctly.

A PO/PCR order is specified using the custom FIX tag *AquisOrderAttribute* (27010) on the New Order Single message. If the order is cancelled back to prevent an aggressive trade the Execution Report message, with *OrdStatus* (39) = *Cancelled* (4), will carry the reason 'PO' in the *Text* (58) field.

Cancel/Replace requests for a PO/PCR order (for example to change price) will also require the custom tag to be set. The order will only be updated on the order book if it will not trade on entry, otherwise the order will be cancelled back to the trading Member.



Note that the custom tag 27010 is not returned by Aquis on any Execution Report messages so as not to affect any processing of order status or trading activity.

A PO/POCR order can also be a Restricted Order. See Restricted Orders for further details.

For further details on message formats and values for New Order Single and Order Cancel/Replace Request messages, see Section 5.1 and Section 5.3 respectively.

## 2.7 Restricted Orders

The Restricted rule prevents order executions where both sides of the trade are Restricted.

Self-trade prevention rules are applied first, independently from the Restricted rule.

To send a Restricted order, the member should send orders with the relevant *AquisOrderAttribute* (27010) and *TimeInForce* (59) set. The *OrdType* (40) = 2 (Limit).

Restricted Order Type	<i>AquisOrderAttribute</i> (27010)	<i>TimeInForce</i> (59)	Behaviour
Restricted	5	Day (0)	Order behaves as per standard Post Only behaviour, except order will not interact with other Restricted Orders.
		FOK (4)	Order behaves as per standard FOK, except order will not interact with other Restricted Orders.
		IOC (3)	Order behaves as per standard IOC, except order will not interact with other Restricted Orders.
Restricted Cancel Replace	6	Day (0)	Order behaves as per standard POCR behaviour, except order will not interact with other Restricted Orders.
		FOK (4)	Order behaves as per standard FOK, except order will not interact with other Restricted Orders.
		IOC (3)	Order behaves as per standard IOC, except order will not interact with other Restricted Orders.

## 2.8 Timestamping

Aquis FIX timestamps will be to microsecond ( $\mu$ s) granularity.

## 2.9 Conditional IOI

Aquis supports *conditional actionable indication of interests (IOIs)* into the AMP (Aquis Matching Pool). An IOI should be sent as a *New Order Single* with *ConditionalType (8002) = IOI (1)*. If the conditions are met and a match is found, a firm up invite will be sent: *Execution Report* with *OrderStatus (39) = Done For Day (3)* and *ConditionalFlag (8002) = Firm-Up (1)*. A firm-up should be sent as a *New Order Single* with *ConditionalType (8002) = Firm-Up (2)* and *IOIID (23)* set as the *CIOrdID (Tag 11)* of the invited IOI.

## 3 FIX Message Header and Trailer

The following sections detail the FIX tags and values that Aquis expects and supports in the header and trailer of incoming and outgoing FIX 4.2 messages.

### 3.1 Header on messages to Aquis

Aquis will process the following header fields on incoming messages and will ignore all others:

Tag	Field Name	Req'd	Comments
8	BeginString	Y	FIX 4.2 (Always unencrypted, must be first field in message)
9	BodyLength	Y	(Always unencrypted, must be second field in message)
35	MsgType	Y	(Always unencrypted, must be third field in message)
34	MsgSeqNum	Y	Message sequence number (inbound to Aquis) for today's trading session
43	PossDupFlag	N	Set to Y on retransmitted messages (e.g. following a Resend Request)
49	SenderCompID	Y	ID of sending firm, as agreed with Aquis
52	SendingTime	Y	Time of message transmission in UTC
56	TargetCompID	Y	ID representing Aquis MTF, as agreed
97	PossResend	N	Set to Y to indicate that message may contain information that has been sent under another sequence number. Aquis will process Order Cancel Request messages that are flagged as possible re-sends under a new sequence number. Aquis will not process New Order Single or Order Cancel/Replace Request messages that are flagged as re-sent under a new sequence number
115	OnBehalfOfCompID	N	ID representing trading Member, as agreed with Aquis, for service bureau connections
122	OrigSendingTime	N	For retransmitted messages ( <i>PossDupFlag</i> = Y), the time in UTC that the message was initially sent. If not available, then set to same value as <i>SendingTime</i>

## 3.2 Header on messages from Aquis

Aquis will only include the following header fields on outgoing messages:

Tag	Field Name	Req'd	Comments
8	BeginString	Y	FIX 4.2 (Always unencrypted, will be first field in message)
9	BodyLength	Y	(Always unencrypted, will be second field in message)
35	MsgType	Y	(Always unencrypted, will be third field in message)
34	MsgSeqNum	Y	Message sequence number (inbound from Aquis) for today's trading session
43	PossDupFlag	N	Set to Y on retransmitted messages (e.g. following a Resend Request)
49	SenderCompID	Y	ID representing Aquis MTF, as agreed
52	SendingTime	Y	Time of message transmission in UTC
56	TargetCompID	Y	ID of counterparty firm, the value originally sent to Aquis as the <i>SenderCompID</i> in the related incoming message
122	OrigSendingTime	N	For retransmitted messages ( <i>PossDupFlag</i> = Y), the time in UTC that the message was initially sent. If not available, then set to same value as <i>SendingTime</i>
128	DeliverToCompID	N	The value originally sent to Aquis as the <i>OnBehalfOfCompID</i> if received from a service bureau

Please note that Aquis will not re-transmit application messages other than in response to a Resend Request, and so does not use *PossResend*.

## 3.3 Message Trailer

In the FIX message trailer, Aquis expects and supports only the mandatory *Checksum* (10) as the last field in each message.

## 4 FIX Session Level Management

This section identifies the messages used to establish, maintain and conclude a FIX trading session, and to re-establish a session after a disconnection including the recovery of any missed messages.

The structure of these messages corresponds to the standard FIX 4.2 protocol and their use is discussed in more detail below.

### 4.1 Sequence Numbers

Aquis will re-set inbound and outbound sequence numbers back to one overnight, ready for the next trading day. Trading counterparties should do the same.

Messages should be sent and received, and processed, in a sequenced order. During an established FIX session, if a message is received with a lower than expected sequence number (i.e. number already seen) then Aquis will logout the session and drop the connection. If a message is received with an unexpectedly high sequence number then Aquis will respond with a Resend Request to recover the missing messages before proceeding.

### 4.2 Logon

The first message Aquis expects to receive from a client after the TCP/IP connection has been established is a Logon message (*MsgType* (35) = A).

The *SenderCompID* and *TargetCompID* fields are validated by Aquis against the expected trading configuration. If this validation fails, the connection is terminated without sending any message.

The sequence number on the initial Logon for each trading day should be one. If the Logon is to re-establish a broken connection, the sequence number should correspond to the next expected inbound sequence number. If there have been connection problems, or following a drop in connectivity where messages were lost, the sequence number may be higher than expected and message recovery will follow (see below). However, if the sequence number is unexpectedly low then the connection is terminated without sending any message.

The heartbeat interval *HeartBtInt* (108) must also be specified in the Logon message. This value is specified in seconds and should be set at value between 5 and 120 seconds, as required by the counterparty.

On receipt of a valid Logon message, Aquis will respond with a Logon message back (echoing the requested heartbeat interval) and then deal with any message recovery (see below). The counterparty should wait until it receives a valid Logon response before sending further messages to Aquis.

If unexpectedly high sequence numbers were detected by either party, message recovery should be initiated. Otherwise the session is now established and should be maintained throughout the trading day.

### 4.3 Recovery

After a drop in connectivity, it is possible that the client will have missed execution messages. This will be detected by the client receiving an unexpectedly high sequence number on the Logon response and they should initiate message recovery by sending a Resend Request (*MsgType* = 2).

A Resend Request should be processed, even if it is received with a high sequence number.

As per the FIX protocol the Resend Request may be for a set range of messages, or open ended by setting *EndSeqNo* (16) = 0. Aquis will handle either type of request.

Aquis will respond to the Resend Request by resending any application messages that have been missed and by using the Sequence Reset – Gap Fill message (*MsgType* = 4, *GapFillFlag* (123) = Y) to cover consecutive administrative messages. All retransmitted messages will be sent with *PossDup* (43) = Y.

Similarly, if there have been connectivity problems, it is possible that the sequence number on the inbound Logon from the client will be unexpectedly high. Aquis will issue a Resend Request for the missed messages. The client may wish to consider sending a gap fill rather than resending any new order messages, to avoid entering stale orders into different market conditions.

### 4.4 Heartbeat and Test Request

Aquis will send a Heartbeat message (*MsgType* = 0) if no other messages have been sent for the agreed heartbeat interval, *HeartBtInt*.

Similarly, if no messages have been received for *HeartBtInt* +1 seconds then Aquis will send a Test Request message (*MsgType* = 1) to test the connection and the responsiveness of the counterparty application. The Test Request message carries a *TestReqID* (112) value and the expected response is a Heartbeat message echoing back this *TestReqID* value.

If there is no response to the Test Request and overall no messages have been received for 2 x *HeartBtInt* seconds then Aquis will logout the client and terminate the connection.

Aquis expects the client's FIX application to behave similarly, to maintain the session and to detect and react to abnormal behaviour.

## 4.5 Logout

Either side may send a Logout message (*MsgType* = 5) to end the FIX session. The initiator should continue to process messages until it receives a Logout message in response and it may then terminate the connection.

Under normal circumstances, Aquis will maintain the FIX session throughout the trading day and only issue a Logout prior to the maintenance window at the end of the day, after market close.

Aquis will respond to a client Logout and will also issue a Logout if it receives a client message with a sequence number lower than expected and the *PossDupFlag* (43) is not set. A network level disconnection or an absence of messages for two heartbeat intervals are also treated as if the client had logged out.

## 4.6 Reject

Aquis will use a session level Reject message (*MsgType* = 3) to respond to messages that break the session protocol or contain missing or incorrect fields. However this should be rare, and where possible Aquis will respond with application level reject messages, such as OrderCancelReject or Execution Report – *OrdStatus* Rejected.

## 5 FIX Application Messages

This section describes the application messages used for order entry, order management and trade reporting. In particular, it identifies the specific fields and field values used by Aquis to provide its trading services.

### 5.1 New Order Single

Aquis supports the FIX New Order Single message for order entry as detailed below:

Tag	Field Name	Req'd	Comments
<i>Standard Header</i>		Y	<i>MsgType</i> (35) = D
1	Account	N	Optional account field to specify House or Client Account for use with clearing CCP. If not supplied, Aquis will assume House
11	ClOrdID	Y	Unique for each order on this session for the trading day. Maximum length 20 characters. Note that for performance reasons Aquis only validates that ClOrdID is unique, rejecting any duplicates, against currently open orders
15	Currency	N	Required if ISIN is used to identify the security, <i>EdSource</i> (22) = 4 (ISIN) Values accepted: GBX – Sterling (in pence) GBP – Sterling (in pounds) EUR – Euro CHF – Suisse Franc DKK – Danish Krone NOK – Norwegian Krone SEK – Swedish Krona USD – United States Dollar
18	ExecInst	N	Required if <i>OrdType</i> =P. Instructions for order handling. Values supported by Aquis: M = Midpoint peg (pegged to midpoint of PBBO)
21	HandlInst	N	1 = Automated execution order (private, no broker intervention). Note this is the only acceptable value (default if not supplied)
22	IDSource	N	Values supported by Aquis: 4 = ISIN 5 = RIC
23	IOIID	N	ClOrdID (Tag 11) of the invited IOI, must be sent for firm up orders.
38	OrderQty	Y	Number of shares
40	OrdType	Y	2 = Limit 5 = Market on Close, for the Aquis Market at Close (MaC) P = Pegged, for the Aquis Matching Pool (AMP) and Dark- to-lit order sweep
44	Price	N	Limit price is required for limit orders; Not supported on MaC orders. Not required for AMP only orders. Required for Sweep Orders.
47	OrderCapacity	N	Values supported by Aquis: A = AOTC P = DEAL (default if tag not supplied)

Tag	Field Name	Req'd	Comments
			R = MTCH
48	SecurityID	N	If using alternative symbology, RIC (primary or Aquis) or ISIN depending on the value of <i>IDSource</i> (22)
54	Side	Y	1 = Buy 2 = Sell
55	Symbol	N	Uniform symbology code for the security (not required if alternative symbology is used)
59	TimeInForce	N	0 = Day (default if tag not supplied) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good Till Date – will expire at time in <i>ExpireTime</i> (126) field. Date must be today's date. 8 = Good For Auction (GFA) Only Day orders are valid for the Market at Close (MaC). Only Day and GFA orders are valid for the AoD. GFA orders are only valid for the AoD. Only Day and IOC orders are valid for Sweep Orders.
60	TransactTime	Y	Time this order entry request was initiated by the trading Member.
110	MinQty	N	Minimum quantity (shares) of an order to be executed. Only valid when <i>AquisOrderAttribute</i> (27010) = 3,4 or <i>OrdType</i> (40) = P. Mandatory for AMP only orders.
111	MaxFloor	N	Display quantity for an iceberg order. The remainder of the order quantity is held in reserve and is not visible. The display quantity of all orders at a given price level will be traded first and then the hidden quantity. When the display quantity has been fully traded it is refreshed from the reserve.
126	ExpireTime	N	Date/time in UTC of order expiry for a Good Till Date order, with <i>TimeInForce</i> (59) = 6. Date must be today's date.
207	SecurityExchange	N	Required if ISIN is used to identify the security, <i>IDSource</i> (22) = 4 (ISIN). Aquis will accept valid MICs.
453	NoPartyIDs	Y	Indicates number of instances of repeating group*
448*	PartyID	Y	4-byte short code representing decision maker (mapping to long code) 0 = NONE (no client ID) 1 = AGGR (aggregated) 2 = PNAL (pending allocation) 3 = CLIENT (order instructed by client) 4 to 4,294,967,295 = Member-specified short code
447*	PartyIDSource	Y	P = short code
452*	PartyRole	Y	Specifies the role of the party to the trade 3 = Client ID 12 = Executing Decision ID 122 = Investing Decision ID
2376*	PartyRoleQualifier	N	0 = None (default should short code = 0, 1, 2 or 3) 22 = Algorithm (PartyRole = 12 or 122) 23 = Firm or LEI (PartyRole = 3) 24 = Natural Person (PartyRole = 3, 12 or 122)
1724	DEAFlag	N	Whether the order originates from a Direct Electronic Access Client 0 = No (default) 5 = Yes
8002	ConditionalType	N	Absence of this tag indicates a firm order.



Tag	Field Name	Req'd	Comments
			1 = IOI 2 = Firm-Up
8015	OrderAttribute	N	Tag can contain multiple values (separated by spaces). The presence of a value indicates the following: 2 = Liquidity provision activity 4 = Algorithmic order
9004	Internalisation	N	Self-trade prevention to prevent members trading against their own orders. 0 = Not-enabled (default) 4 = Self-trade prevention enabled Only valid when <i>OrdType</i> (40) = P. If set to 0, configured self-trade prevention settings will be ignored. See Self-Trade Prevention (2.5).
20060	RequestCrossingWaiverType	N	Specifies whether an order may be executed under: 1 = either Reference Price Waiver (RPW) or Large in Scale Waiver (LIS) (Default) 2 = only under LIS waiver
27010	AquisOrderAttribute	N	Values supported when <i>OrdType</i> (40) = 2: 0 = Continuous Limit Order Book Regular Order (default) 1 = Continuous Limit Order Book Post-Only Order 2 = Continuous Limit Order Book POCR Order 3 = Auction on Demand Limit Order 4 = Auction on Demand Limit (Pegged/Limit Order) 5 = Continuous Limit Order Book Restricted Order* 6 = Continuous Limit Order Book Restricted CR Order*  Order Sweep Values supported when <i>OrdType</i> (40) = P. 0 = Route to lit (Sweep order DLO or DLOD) 1 = Route to lit and Post Only (Sweep order DLPO) 2 = Route to Lit and POCR 5 = Route to Lit and Restricted Order* 6 = Route to Lit and Restricted CR Order*  *when TIF=DAY, the order will inherit PO/POCR behaviour. When TIF=IOC/FOK the order will inherit IOC/FOK behaviour. FOK not supported for order sweeps.

### 5.1.1 Account Field

The Account (1) field may be used by Members to specify whether trades against a particular order should be allocated to the House account at the CCP or to a specific client account.

The value 'H' should be used to nominate the House account and the value 'C' to nominate a default client account, pre-agreed with the CCP. The field may also be used to nominate a specific account using a value in the format 'C:123456' where '123456' is the required client account ID.

If the field is not supplied, then allocation to the House account is assumed by default and is echoed back in execution messages.

## 5.1.2 Symbology

Aquis encourages Members to use the Uniform Symbology Code in the *Symbol* (55) field to identify the security that they wish to trade on the platform. This symbology scheme has been adopted by a number of European venues; please contact the Aquis Connectivity team for more information if required.

If a Member's trading system does not yet support Uniform symbology, Aquis also accepts ISIN and RIC as alternative security identifiers. To do so, the *IDSource* (22) field must be set to indicate the chosen symbology: value 4 for ISIN, 5 for RIC.

If using an ISIN to identify a security, the ISIN must be provided in the *SecurityID* (48) field and the fields *Currency* (15) and *SecurityExchange* (207) must also be set to the required currency and market (MIC) in order to uniquely identify the security.

If using a RIC to identify a security, either the Aquis RIC or the primary market RIC must be provided in the *SecurityID* (48) field.

If choosing to use the *IDSource* option to specify the security by ISIN or RIC then the *Symbol* (55) field will no longer be validated against the Aquis security database.

Subsequent FIX Execution Report messages from Aquis will include the same symbology information as was supplied in the initial New Order Single message with the exception of the *Symbol* (55) field, which will return the Uniform Symbology Code.

## 5.1.3 Order Sweeps Order Entry

Aquis supports numerous types of order sweeps. The order is first sent to the dark book and any residual is swept to the lit order book. The residual portion behaves as per member instruction.

*OrderAttribute* (27010) is not applicable for members wishing to submit a dark order. For order sweeps, the following values are used:

Tag	Expected Value
Message Type (35)	D = New Order Single
OrderType (40)	P = Pegged Order (for non-display order book)
TimeInForce (59)	Supported values: 0 = Day 3 = IOC
AquisOrderAttribute (27010)	One of the following: 0 = Route to lit (Sweep order DLO or DLOD) 1 = Route to lit and Post Only (Sweep order DLPO) 2 = Route to Lit and POOR 5 = Route to Lit and Restricted Order*

Tag	Expected Value
	6 = Route to Lit and Restricted CR Order* *with optional IOC for aggressive behaviour.

## 5.2 Order Cancel Request

Aquis supports the FIX Order Cancel Request message to fully cancel an open order, as detailed below:

Tag	Field Name	Req'd	Comments
<i>Standard Header</i>		Y	<i>MsgType</i> (35) = F
11	ClOrdID	Y	Unique identifier of the cancel request. Maximum length 20 characters
15	Currency	N	As provided on the original order
22	IDSource	N	As provided on the original order
41	OrigClOrdID	Y	Identifier for the original or last modified version of the order
48	SecurityID	N	As provided on the original order
54	Side	Y	As provided on the original order
55	Symbol	N	As provided on the original order
60	TransactTime	Y	Time this order cancel request was initiated by the trading Member
453 <sup>+</sup>	NoPartyIDs	N	Indicates number of instances of repeating group*
448*	PartyID	N	4-byte short code representing decision maker (mapping to long code) 0 = NONE (no client ID) 1 = AGGR (aggregated) 2 = PNAL (pending allocation) 3 = CLIENT (order instructed by client) 4 to 4,294,967,295 = Member-specified short code
447*	PartyIDSource	N	P = short code
452*	PartyRole	N	Specifies the role of the party to the trade 3 = Client ID 12 = Executing Decision ID 122 = Investing Decision ID
2376*	PartyRoleQualifier	N	0 = None (default should short code = 0, 1, 2 or 3) 22 = Algorithm (PartyRole = 12 or 122) 23 = Firm or LEI (PartyRole = 3) 24 = Natural Person (PartyRole = 3, 12 or 122)
1724 <sup>+</sup>	DEAFlag	N	Whether the order originates from a Direct Electronic Access Client 0 = No (default) 5 = Yes
8015 <sup>+</sup>	OrderAttribute	N	Tag can contain multiple values (separated by spaces). The presence of a value indicates the following: 2 = Liquidity provision activity 4 = Algorithmic order

\* = repeating group

+ = optional for Cancels, defaults to original order value

Note that PartyIDs are optional for cancel requests e.g. in the event that the order canceller differs from the original order submitter.

### 5.3 Order Cancel/Replace Request

Aquis supports the FIX Order Cancel/Replace Request message for order modification as detailed below.

It may be used to modify the limit price of an order and/or to increase or decrease the total order quantity.

For MaC orders, the *Order Capacity* (47) can be modified up to the point when the trade is published. If the *Order Capacity* is modified, members are expected to update their MiFID II tags (448, 447, 452 & 2376) as appropriate.

For iceberg orders, the display quantity may be modified using *MaxFloor* (111). If the field is not sent, the original display quantity will be reused and will be applied to the modified order. Note that Aquis does not support the modification of a regular limit order into an iceberg order.

For non-display orders on the Aquis Matching Pool, the minimum quantity can be modified using *MinQty* (110).

For Order Sweeps, only the lit portion can be modified if it is an open Day or a Post Only order. Aquis does not support the re-opening of a fully filled order by increasing order quantity and does not send "Pending Replace" messages.

For AoD orders, the *Price* (44), *OrderQty* (38) and *MinQty* (110) can be modified.

Tag	Field Name	Req'd	Comments
<i>Standard Header</i>		Y	<i>MsgType</i> (35) = G
11	ClOrdID	Y	Unique identifier for the replacement order on this session for the trading day. Maximum length 20 characters.
15	Currency	N	As provided on the original order
18	ExecInst	N	Required if <i>OrdType</i> =P. Instructions for order handling. Values supported by Aquis: M = Midpoint peg (pegged to midpoint of PBBO)
22	IDSource	N	As provided on the original order
38	OrderQty	Y	New total order quantity (number of shares)
40	OrdType	Y	As provided on the original order
41	OrigClOrdID	Y	Identifier for the original or last modified version of the order
44	Price	N	New limit price, required for limit orders
47	Order Capacity	N	Values supported by Aquis: A = AOTC P = DEAL (default if tag not supplied)

Tag	Field Name	Req'd	Comments
			R = MTCH
48	SecurityID	N	As provided on the original order
54	Side	Y	As provided on the original order
55	Symbol	N	As provided on the original order
59	TimeInForce	N	TIF cannot be modified
60	TransactTime	Y	Time this order modification request was initiated by the trading Member
110	MinQty	N	New minimum quantity (shares) of an order to be executed. Mandatory when <i>OrdType</i> (40) =P.
111	MaxFloor	N	New display quantity for an iceberg order, otherwise original value will be reused
453 <sup>+</sup>	NoPartyIDs	N	Indicates number of instances of repeating group*
448*	PartyID	N	4-byte short code representing decision maker (mapping to long code) 0 = NONE (no client ID) 1 = AGGR (aggregated) 2 = PNAL (pending allocation) 3 = CLIENT (order instructed by client) 4 to 4,294,967,295 = Member-specified short code
447*	PartyIDSource	N	P = short code
452*	PartyRole	N	Specifies the role of the party to the trade 3 = Client ID 12 = Executing Decision ID 122 = Investing Decision ID
2376*	PartyRoleQualifier	N	0 = None (default should short code = 0, 1, 2 or 3) 22 = Algorithm (PartyRole = 12 or 122) 23 = Firm or LEI (PartyRole = 3) 24 = Natural Person (PartyRole = 3, 12 or 122)
1724 <sup>+</sup>	DEAFlag	N	Whether the order originates from a Direct Electronic Access Client 0 = No (default) 5 = Yes
8002	ConditionalType	N	Absence of this tag indicates a firm order. 1 = IOI 2 = Firm-Up
8015 <sup>+</sup>	OrderAttribute	N	Tag can contain multiple values (separated by spaces). The presence of a value indicates the following: 2 = Liquidity provision activity 4 = Algorithmic order
27010 <sup>+</sup>	AquisOrderAttribute	N	0 = No constraint, regular order (default if tag not supplied) 1 = Post-Only Order 2 = POOCR 4 = Restricted Order 5 = Restricted CR Order

Note that PartyIDs are optional for modify requests e.g. in the event that the order modifier differs from the original order submitter.

## 5.4 Large In Scale/Benchmark Cross Trade Capture Report

Aquis uses the Trade Capture Report message from later versions of the FIX specification (specifically 4.4) as an extension to our existing FIX 4.2 ports for the purposes of allowing members to submit negotiated trades to the exchange.

Tag	Field Name	Req'd	Comments
<i>Standard Header</i>		Y	<i>MsgType</i> (35) = AE
1	Account	N	Optional account field to specify House or Client Account for use with clearing CCP. If not supplied, Aquis will assume 'House'.
15	Currency	N	Required if ISIN is used to identify the security, <i>IDSource</i> (22) = 4 (ISIN) Values accepted: GBX – Sterling (in pence) GBP – Sterling (in pounds) EUR – Euro CHF – Suisse Franc DKK – Danish Krone NOK – Norwegian Krone SEK – Swedish Krona USD – United States Dollar
22	IDSource	N	Values supported by Aquis: 4 = ISIN 5 = RIC Please refer to Section 5.1.2
31	LastPx	Y	Price of the trade
32	LastQty	Y	Quantity of the trade
48	SecurityID	N	If using alternative symbology, RIC (primary or Aquis) or ISIN depending on the value of <i>IDSource</i> (22)
55	Symbol	N	Uniform symbology code for the security (not required if alternative symbology is used)
60	TransactTime	Y	Time the transaction represented by this TCR occurred (expressed in UTC)
75	TradeDate	Y	Date of trade referenced in this message in YYYYMMDD format
207	SecurityExchange	N	Required if ISIN is used to identify the security, <i>IDSource</i> (22) = 4 (ISIN). Aquis will accept valid MICs
571	TradeReportID	Y	Unique identifier for the Trade Capture Report
828	TrdType	Y	Trade type indicating: 1 = Block Trade (default if not supplied, LIS_CROSS) 6 = Weighted Average Price Trade (defined in tag 829)
829*	TrdSubType	Y	Further definition to tag 828 as required: 0 = Block Trade for clearing 1 = Block Trade not for clearing 2 = Volume Weighted Average Price Trade for clearing 3 = Volume Weighted Average Price Trade not for clearing 4 = Time Weighted Average Price Trade for clearing 5 = Time Weighted Average Price Trade not for clearing
8015	OrderAttribute	N	The presence of the following value indicates that the transaction was executed as a result of algorithmic trading as defined in Article 4(1)(39) of Directive 2014/65/EU (default if tag not supplied = No):

Tag	Field Name	Req'd	Comments
			4 = Algorithmic trade

\* = Self-trade suppression for clearing at the session level takes precedence if the value in tag 829 is 0, 2 or 4 (See [Section 2.3](#)).

## 5.5 Large In Scale/Benchmark Cross Trade Capture Report Acknowledgement

In response to a member submitted Trade Capture Report, Aquis will send the member back the following acknowledgement:

Tag	Field Name	Comments
<i>Standard Header</i>		<i>MsgType</i> (35) = AR
1	Account	Copied from the incoming TradeCaptureReport
15	Currency	Copied from the incoming TradeCaptureReport
17	ExecID	Unique ID for the trading day for this Trade Capture Report
22	IDSource	Copied from the incoming TradeCaptureReport
31	LastPx	Copied from the incoming TradeCaptureReport
32	LastQty	Copied from the incoming TradeCaptureReport
48	SecurityID	Copied from the incoming TradeCaptureReport
55	Symbol	Copied from the incoming TradeCaptureReport
58	Text	To provide error text in case of a reject message
60	TransactTime	Copied from the incoming TradeCaptureReport
75	TradeDate	Copied from the incoming TradeCaptureReport
128	DeliverToCompID	The value originally sent to Aquis as the <i>OnBehalfOfCompID</i> if received from a service bureau
150	ExecType	TCR status: F = Trade 8 = Rejected
207	SecurityExchange	Copied from the incoming TradeCaptureReport
571	TradeReportID	Copied from the incoming TradeCaptureReport
828	TrdType	Copied from the incoming TradeCaptureReport
829	TrdSubType	Copied from the incoming TradeCaptureReport

## 5.6 Execution Report

Aquis uses the FIX Execution Report message to accept or to reject a New Order Single, and to accept an Order Cancel Request or an Order Cancel/Replace Request.

Trade reports, and any subsequent trade busts, are also sent using the Execution Report.

For orders submitted to the Aquis Market at Close (MaC) the Execution Report message is used to indicate the quantity accepted for crossing at MaC lock time (see Section 5.6.1).

For iceberg orders, when an order is refreshed from reserve quantity an Execution Report is used to carry the market data order ID for this new displayed quantity (see Section 5.6.3).

The fields and values provided by Aquis are detailed below:

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	<i>MsgType</i> (35) = 8
1	Account	N	Account is returned for Order Acknowledgements, Trade Acknowledgements and Rejects if provided on the original New Order Single message.
6	AvgPx	Y	Average price of quantity so far traded on this order (zero if no trade)
11	ClOrdID	Y	The current <i>ClOrdID</i> identifier of the order, or the <i>ClOrdID</i> of the request that is being accepted
14	CumQty	Y	Cumulative quantity so far traded on this order (zero if no trade)
15	Currency	N	Currency in which the security is traded
17	ExecID	Y	Unique ID for the trading day for this Execution Report Corresponds to the TVTIC (RTS 24 Art.12 & RTS 22 Field 3 Table 2). Please note, for the purposes of transaction reporting the letter prefix (e.g. 'B' or 'S') should be removed from the unique ID and only the numeric code reported
18	ExecInst	N	Returned when <i>OrdType</i> (40) = P, as provided on the original order.
19	ExecRefID	N	Sent for a trade bust ( <i>ExecTransType</i> = 1) to identify the earlier Execution ID for the original trade
20	ExecTransType	Y	0 = New (for order related messages and trade reports) 1 = Cancel (for a trade bust)
22	IDSOURCE	N	As provided on the original order
30	LastMkt	N	Provides the Aquis MIC for the execution: AQXE – Aquis PLC lit trades including MaC AQXA – Aquis PLC AoD trades AQXD – Aquis PLC non-display (AMP) trades AQEU – Aquis Europe lit trades including MaC AQEA – Aquis Europe AoD trades AQED – Aquis Europe non-display (AMP) trades
31	LastPx	Y	Price of this trade (zero if not a trade)
32	LastShares	Y	Quantity of this trade (zero if not a trade)
37	OrderID	Y	Aquis order reference number
38	OrderQty	Y	Quantity of the order
39	OrdStatus	Y	Status of the order, values sent by Aquis: 0 = New 1 = Partially Filled 2 = Filled 4 = Cancelled 5 = Replaced 8 = Rejected C = Expired
40	OrdType	N	As provided on the original order. For Order Sweeps refer to 'Order Sweeps' section of specification.
41	OrigClOrdID	N	ClOrdID of the order that is being cancelled or replaced (for solicited cancel or replace responses only)
44	Price	N	Limit price, if provided on the original order
47	OrderCapacity	N	As provided on the original order or as provided on a modified MaC order
48	SecurityID	N	As provided on the original order
54	Side	Y	As provided on the original order



Tag	Field Name	Req'd	Comments
55	Symbol	Y	Uniform symbology code for the security
58	Text	N	To provide error text in case of a reject message or cancellation reason if a resting order is force cancelled
59	TimeInForce	N	As provided on the original order
60	TransactTime	Y	Time of this event in UTC
110	MinQty	N	As provided on the original order
111	MaxFloor	N	Display quantity applicable to an iceberg order
126	ExpireTime	N	As provided on the original order
128	DeliverToCompID	N	The value originally sent to Aquis as the <i>OnBehalfOfCompID</i> if received from a service bureau
150	ExecType	Y	Reason for this report, values sent by Aquis: 0 = New 1 = Partially Filled 2 = Filled 3 = Done for Day 4 = Cancelled 5 = Replaced 8 = Rejected C = Expired D = Restated
151	LeavesQty	Y	Quantity still open for execution
198	SecondaryOrderID	N	The Aquis market data order ID for tracking purposes, sent on a restatement message after the refresh of displayed quantity for an iceberg order
207	SecurityExchange	N	As provided on the original order
375	ContraBroker	N	Only provided on trade reports, the identifier of the CCP unless a CCP-suppressed 'self-trade' where the value is set to 'SELF'
378	ExecRestatementReason	N	Only provided on Restatement for iceberg or MaC orders: 4 = Broker option – indicates iceberg order has refreshed or MaC order has fully matched 5 = Partial reduction of order quantity (exchange initiated partial cancel) – indicates MaC order has partially matched
382	NoContraBrokers	N	Only provided on trade reports, if present value will = 1
851	LastLiquidityInd	N	FIX 4.4 tag for trade liquidity indicator. Only provided on trade reports, values sent by Aquis: 1 = Added liquidity 2 = Removed liquidity 4 = Auction (for AoD and MaC trades)
880	TVTIC	N	Returned on trades. The TVTIC required for transaction reporting purposes.
1724	DEAFlag	N	Returned when <i>OrdType</i> (40) = P if provided on the original order. 0 = No (default) 5 = Yes
8002	ConditionalType	N	1 = IOI (Invite) 2 = Firm-Up
8013	TrdRegPublicationReasons	N	Only provided when <i>OrdType</i> (40) = P. For orders, indicates the pre-trade transparency waiver under which the order is considered in the matching engine. For trades, indicates the pre-trade transparency waiver under which the trade was conducted. Values sent by Aquis:

Tag	Field Name	Req'd	Comments
			3 = Reference Price Waiver 9 = Large in Scale Waiver
8015	OrderAttributeTypes	N	Only provided when <i>OrdType</i> (40) = P if provided on the original order.

### 5.6.1 Trade Bust

In the event of a Trade Bust, Members should refer to the *ExecRefID* (19) to identify the original Execution ID. Please note that *ExecID* (17) and *TVTIC* (880) should be disregarded.

If a Large In Scale/Benchmark Cross Trade Capture Report is cancelled by Aquis, 2 Trade Bust messages will be returned to the reporter of the transaction.

### 5.6.2 Market at Close

Orders may be submitted to the Aquis PLC (AQXE) or Aquis Europe (AQEU) Market at Close (MaC) at any time during the trading day. Orders submitted during continuous trading phase will be accepted but will not be published until the MaC opens. Up until the MaC lock phase, orders may be entered, replaced or cancelled.

Should a particular security at the Market of Listing not enter an auction phase within 30 seconds of the close of continuous trading on Aquis, orders in that security will be cancelled back to the Member.

When the MaC is locked, Members are notified of the quantity accepted for matched orders by an Execution Report (Restatement) message: *ExecType* (150) = D (Restated) with a zero price.

During the MaC lock phase, the *Order Capacity* (47) can be modified up to the point when the trade is published.

If the order has only partially matched, the accepted quantity is reported in the *OrderQty* (38) field. The *ExecRestatementReason* (378) also indicates that there has been a partial cancel of order quantity. Note that, for clarity, the Aquis MaC will still send a restatement message if the order fully matches. In this case, the *OrderQty* will not be reduced and the *ExecRestatementReason* will be used to indicate that the order has fully matched.

If an order is unmatched at lock time then the order will expire and cancel back to the Member.

When the Market of Listing auction ends, the locked matched orders on Aquis are executed at the closing price. Trade reports are sent to the Member. Note that these Execution Report messages carry *LastLiquidityInd* (851) = 4 (Auction). *LastMkt* (30) will be AQXE or AQEU depending on the order book.

If for any reason the Market of Listing auction is cancelled or extended for a security, the locked orders in that security will be cancelled back to the Member.

### 5.6.3 Auction on Demand (AoD)

Once an AoD comes to an end trade reports are then sent to the Member for successful matches. Note that these Execution Report messages carry *LastLiquidityInd* (851) = 4 (Auction). *LastMkt* (30) will be AQXA or AQEA depending on the order book.

### 5.6.4 Iceberg Order Refresh

When the currently displayed quantity of an iceberg order has been traded, it is refreshed from the non-displayed reserve quantity. This new displayed quantity is published on Aquis market data as a new order, with a new market data order ID.

The trading Member is notified of this display quantity refresh by an Execution Report (Restatement) message: *ExecType* (150) = D (Restated). The new market data order ID is provided in the *SecondaryOrderID* (198) field, for tracking purposes against the market data feed.

Note that the Aquis OrderID (37) applies to the iceberg order as a whole and remains unchanged.

### 5.6.5 Order Sweep Executions

When submitting an Order Sweep, members will receive an Execution Report *MsgType* (35) = 8 with *OrdStatus* (39) = 0 (New). If the order does not execute, or executes partially, on the dark book this Execution Report will contain *OrdType* (40) = 2 to indicate that this order has been swept to the lit book.

If the order executes on the dark book (partially or fully) the member will receive a subsequent Execution Report, with *OrdType* (40) = P, with the trade details. The residual quantity is swept into the lit book and the member will receive Execution Reports, with *OrdType* (40) = 2, for any executions on the lit book.

## 5.7 Order Cancel Reject

Aquis rejects an Order Cancel Request or an Order Cancel/Replace Request that it cannot act upon with a FIX Order Cancel Reject message.

The fields and values provided by Aquis are detailed below:

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	<i>MsgType</i> (35) = 9

Tag	Field Name	Req'd	Comments
11	ClOrdID	Y	The <i>ClOrdID</i> of the request that is being rejected
37	OrderID	Y	Aquis order reference number. If an unknown order, value will be 0
39	OrdStatus	Y	Status of the order that failed to be cancelled or replaced If an unknown order, value will be set to 8 (Rejected)
41	OrigClOrdID	Y	The ClOrdID that could not be cancelled or replaced.
44	Price	N	Limit price, if provided on the original order
58	Text	N	To provide a reason for the reject
434	CxlRejResponseTo	Y	The type of request that this is a response to: 1 = Order Cancel Request 2 = Order Cancel/Replace Request