

rotork®

Controls

IQTF Pro – Full Output Turn Actuator

Based on the quarter-turn IQT actuator the IQTF provides extended output rotation for part-turn valve types requiring more than 90° for operation. Typical valves include 180° and 270° diverter valves and multiport manifolds requiring bi-directional 360° operation. The IQTF actuator has a low output speed for increased positional accuracy and may also be utilised for low turn, multi-turn applications where slow operation is required.

IQTF Pro – Modulating

With the same outline specification as IQTF, the IQTFM has an extended duty cycle for modulating applications. Includes special fast switching control inputs for hardwired control.

IQTF Pro – Multiport Control

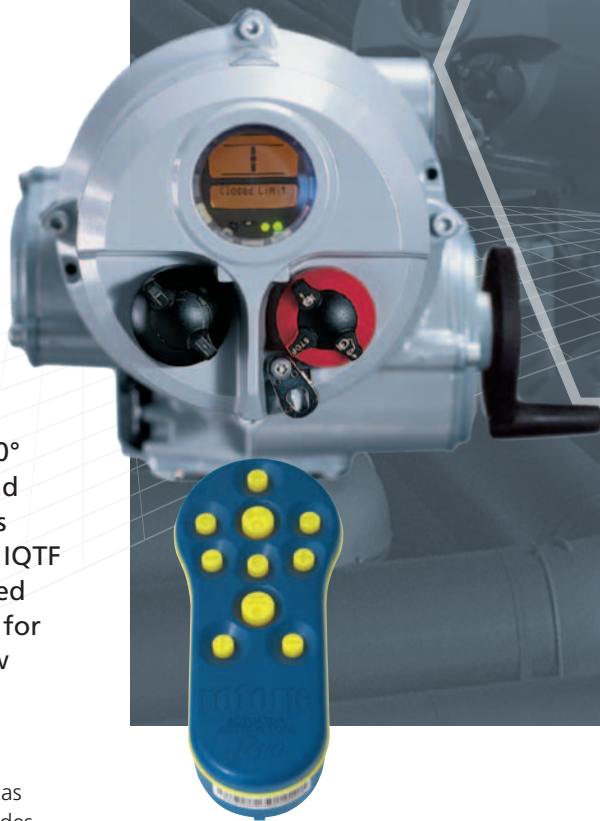
The IQTF – Multiport option extends the actuator's functionality for indexing unidirectional or bi-directional multiport manifold applications. Each port is displayed on the LCD as a port number and control is achieved via Local Selectors, Hardwired Remote Control or Modbus network. For further multiport features see page 2.

IQTF Pro actuators offer the following powerful features:

- Multi-turn and part-turn.
- Slow speed operation for increased accuracy.
- Non-intrusive set-up.
- Clear user friendly controls and indication.
- Simplified torque and position control for increased reliability

Setting Tool Pro features:

- Stores downloaded data for analysis with InSight software on PC's.
- Fast, easy configuration of multiple actuators on site using transferrable settings feature.
- Intrinsically Safe robust construction.



IQTF Pro Range

Full Output Turn Actuator



Established Leaders in Actuation Technology



rotork® Controls

IQTF Pro Multiport

Based on Modbus control with additional firmware, the IQTF Pro – Multiport option extends the IQTF/ IQTFM Pro for indexing, multiport manifold applications. The actuator can be configured for manifolds between 2 and 10 ports with either symmetrical or asymmetrical port spacing. Actuator LCD display indicates port number and when moving between ports, the port numbers on either side. Single direction or bi-direction operation can be accommodated. Port positioning accuracy will be within $\pm 1.5^\circ$ at minimum speed setting.

Control is via local selectors, remote mounted control station or a Modbus network. Local operation and the remote station control will index the ports up or down. Modbus control allows the desired port to be selected; the control intelligently choosing the fastest path to the desired port position when in bi-directional mode. Please note that other network control options are not available with the IQTF Pro Multiport option. Each time the actuator passes through port 1 (“home port”) the port positions will be

re-synchronised to ensure that there is no incremental positioning error. Port set up and configuration is via Pocket Insight software for PDA.

Multiport Features:

- From 2 to 10 ports can be indexed.
- Uni/bi-directional available.
- Local / Remote or Modbus control.
- Port number clearly displayed in LCD.
- Slow speed / high accuracy.
- 360° operation.
- Re-synchronising function to prevent incremental errors.

Multiport Screens:

In conjunction with the features offered by the IQ Pro range (further details below), the Multiport option offers the following feedback information via the new dual LCD.

Fig 1 - Multiport stationary at Port 1

Fig 2 - Multiport moving between Ports 5 & 6

Fig 3 - Multiport limits not configured

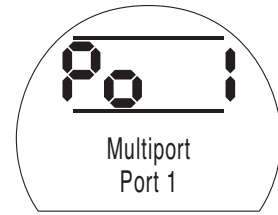


Fig 1

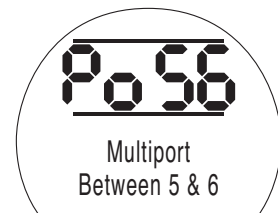


Fig 2

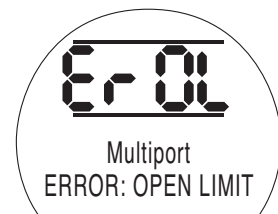


Fig 3

IQTF Pro Features

IQTF Pro actuators use the new Rotork IQ and IQT Pro main board to provide the following powerful features:

- Larger clearer icon and text display.
- Customer configurable multilingual text capability.
- Datalogger valve torque signature profiling.
- Status & monitoring diagnostics.
- Retrofittable to existing IQ & IQT actuators manufactured since 2000.
- Improved data download speed x10.

Rotork Setting Tool Pro features include:

- Non-intrusive, Infra red communication.
- Intrinsically safe for use in hazardous areas.
- On site actuator configuration and data download.
- Data transfer from actuator to PC with free Rotork Insight software*
- Capacity for 10 configuration and 4 datalogger files.
- Multiple configuration capability.
- Compatible with all IQ & IQT actuators.

Multi Language Text and Icon Display



The IQTF Pro range features a new larger and clearer multilingual text and icon display. The descriptive text can now be configured for a number of languages, with each language module downloadable from the rotork website. Once the appropriate languages have been downloaded they can be uploaded to the actuator using the Setting Tool Pro.

The new ergonomically designed and intrinsically safe Rotork Setting Tool Pro is compatible with all existing IQ and IQT range actuators and is safe for use in any environment / hazardous location.

Setting Tool Pro Download & Upload



The Rotork Setting Tool Pro includes a feature which allows the user to extract and store IQ and IQT actuator configuration and datalogger files within the Tool. Stored files can be viewed using a PC running IQ Insight®. Using This tool, stored configuration files can also be uploaded back to IQ and IQT actuators in order to replicate a setup for multiple units (limits must be set individually).

IQ Insight is available free from www.rotork.com

For further information on IQ Pro features, see publication E1120E.

* Note: Setting Tool Pro data transfer capability is compatible with IQ actuators supplied since 2000.

Established Leaders in Actuation Technology

IQTF Pro Range

Full Output Turn Actuator

IQTF Pro Specification

The IQTF Pro has the same specification as the IQ, described fully in Publication PUB002-001.

General

Enclosure Non- hazardous	IEC - IP 68 – 7m / 72 hrs, NEMA4, 4X & 6
Enclosure Hazardous	ATEX, FM, CSA or IEC (For other specific certification, contact Rotork).
Temperature	-30 to +70 °C (see PUB002-001 for full ranges and certification limitations)
Power Supplies	24 VDC, 1 - Phase / 3 - Phase 50/60 Hz Refer to pub. E135E for electrical data
Failsafe Option	Type 1 – 24 VDC customer supplied; Type 2 – Battery Pak (refer to pub. E116E).
Mounting Interface	ISO 5211, MSS - SP101.
Lubrication	Oil bath lubrication. Food grade available as an option.
Handwheel	Side mounted geared handwheel.
Conduit/cable entries	2 x M25. Additional 2 x M25 available as an option.
Orientation	Any
Finish	Polyester powder coating. 2-Pak epoxy available as an option.

Indication

Remote Indication	4 x configurable "S" contacts for valve position, alarm & fault indication.
Remote indication Options	4-20 mA auto-scaling position output (CPT). Network control options include position and alarm status indication.
Monitor Relay	Remote Availability alarm indication.

Duty Cycle

IQTF	S2 - 20%, 60 starts per hour at 75% of rated torque.
IQTFM	S4 - 50%, 1200 starts per hour at 50% of rated torque.

System

Set-up	Non intrusive Infra-red using the Rotork Setting Tool (supplied).
Local Display	LCD position indication (% open) plus set up and alarm displays.
Limit switching	Open/Close limits can be set between 90° and 50 turns. 0.1% angular resolution.
Torque switching	Independently adjustable open and close torque switches can be set in the range 40% to 100% rated torque. "Boost" can be set in the opening direction.
Speed	Setting tool adjustable Refer to IQTF performance table
Datalogger	Standard: Valve torque & starts profiles, statistics and event logs.

Control

Base wiring diagram	6000-000
Local Control	Non-intrusive "Local/Stop/Remote" and "Open/Close" selectors.
Remote control	Hardwired "Open/Close/Stop/ESD" inputs plus "Open/Close" Interlock facility.
Remote control options	Analogue 4-20 mA - Folomatic.
Network control options	IQTF: Pakscan 2-wire control, Modbus, Profibus, Foundation Fieldbus, DeviceNet.
IQTF-Multiport	Modbus plus multiport firmware.

Performance and Mechanical data

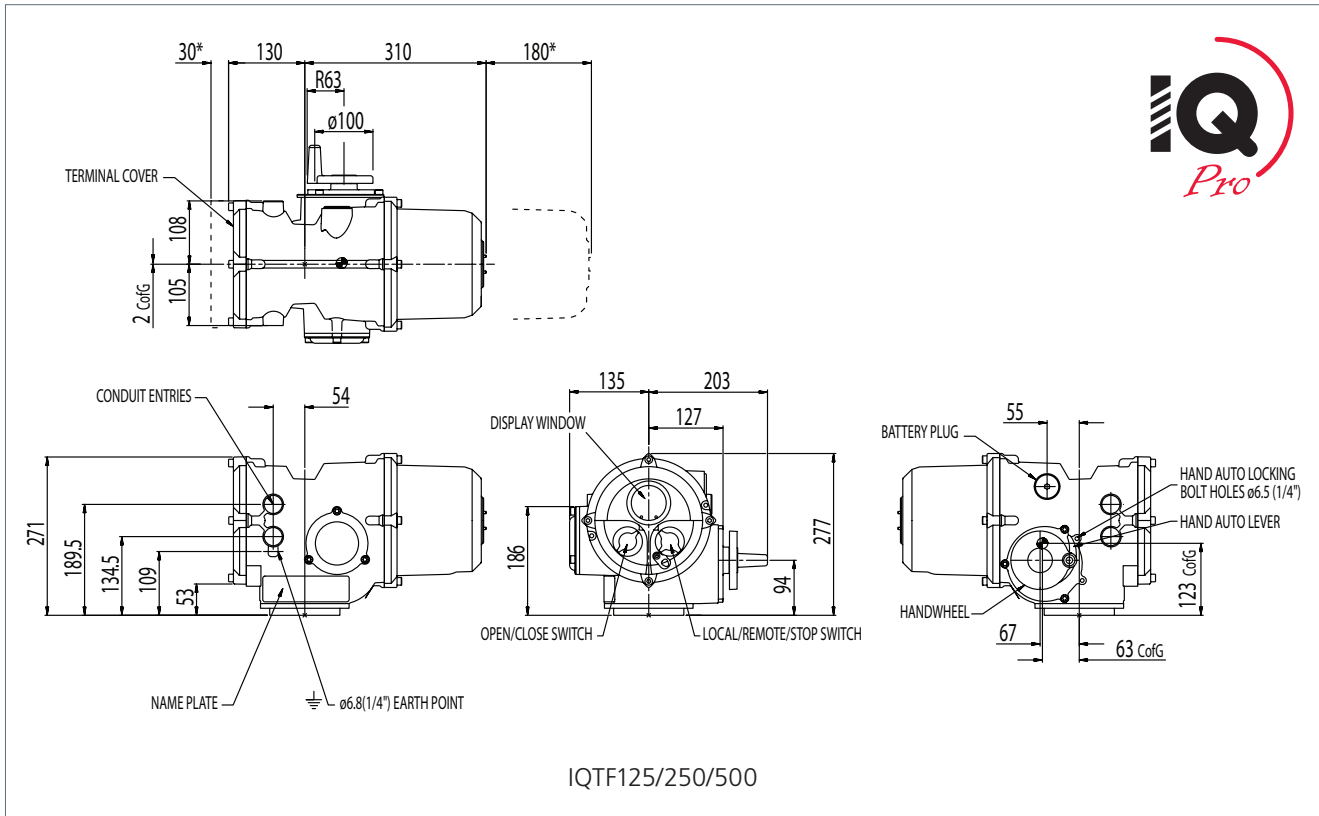
Actuator	IQTF125	IQTF250	IQTF500	IQTF1000	IQTF2000
Torque					
Max Nm	125	250	500	1000	2000
Min Nm	50	100	200	400	800
Max Ft lbs	92	185	369	738	1476
Min Ft lbs	37	74	148	295	590
Operating Speed Range					
rpm (max turns)	0.75 (12) - 3 (45)	0.5 (8) - 1.875 (28)	0.25 (4) - 1.0 (15)	0.125 (2) - 0.5 (8)	0.125 (2) - 0.25 (4)
Flange					
ISO 5211	F05* F07* F10	F07* F10	F10	F12 F14*	F14
MSS SP-101	FA05* FA07* FA10	FA07* FA10	FA10	FA12 FA14*	FA14
Weight					
Kg	22	22	22	37	37
lbs	49	49	49	82	82
Couplings** Spindle acceptance					
Bore & key max mm	22 28 42	28 42	42	60	60
Bore & key max ins	0,87 1,1 1,65	1,1 1,65	1,65	2,36	2,36
Square AF max mm	14 19 32	19 32	32	41	41
Square AF max ins	0,56 0,75 1,25	0,75 1,25	1,25	1,62	1,62

IQTF 24V DC (17-37 Volts) Performance. Torque outputs for 24V DC are the same as above, however speed varies with load.

* Optional flanges F05, FA05, F07 and FA07 use a base adapter plate. Required base type must be specified.

** Couplings are supplied blank for machining by valve maker.

IQTF Pro Dimensional Data



IQTF supporting documents and software are available for download at www.rotork.com

PC Software	IQ Insight, PDA software: IQ Pocket Insight available for free download	E135E E175E3 E117E Dimensions	IQT electric motor performance data IQT Installation & Maintenance Instructions IQ Insight software Available in PDF and DXF format in IQ range - Specifications
PUB002-001-00	IQ & IQT Catalogue		
PUB002-002-00	IQ & IQT Control and Monitoring		

A full listing of our worldwide sales and service network is available on our website.

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