

FUGRO CLASS VII TORQUE TOOL

Fugro's ISO 13628-8/API 17H and 17D (1996) class 7 subsea torque tool offers total versatility, enabling operation of all class 7 rotary actuators.

Designed to be compatible with surface operated torque tool control systems, the class 7 torque tool is hydraulically operated, and capable of developing 33 895 Nm (25 000 lbf-ft) of bi-directional continuous torque output in accordance with the ISO 13628-8 class 7 interface maximum torque requirement.

The mineral oil hydraulic supply is connected to a rear mounted motor on the tool, which engages directly with an integral 61:1 torque multiplier. The multiplier design incorporates the tool's drive socket, fully enclosed by an acetal nose. A torque transducer provides torque

measurement capability in mV/V, and a dual proximity sensor arrangement enables accurate turns count capability. Electrical connection to the remotely operated vehicle (ROV) is by a rear mounted socket.

Tools are supplied with interface hose, cable and depth compensator kits, and can also be supplied with a 2x4 digit external display for local torque and turns indication.

BENEFITS

- API 17N technology readiness level 7 (TRL7)
- Dedicated lift points to safely reduce deck handling requirements
- Reduced equipment spread costs - common control interface with all other Fugro torque tools
- ROV deployable, providing efficiencies during the operations phase
- Multi-operable 17H and 17D connections providing operational efficiencies

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Technical Specifications

General

Size (excluding ROV handle)	(API 17D - 1996)	809 mm (31 7/8") x 405 mm (15 15/16") x 281 mm (11 1/16") (l x w x h)
	(API 17H)	1111 mm (43 3/4") x 405 mm (15 15/16") x 281 mm (11 1/16") (l x w x h)
Weight in air	(API 17D - 1996)	123.1 kg (270 lb)
	(API 17H)	124.5 kg (274 lb)
Weight in water	(API 17D - 1996)	82.6 kg (182 lb)
	(API 17H)	86 kg (190 lb)
Design life		10 years (with regular maintenance)
Design depth		3000 MSW (9,842 ft)
Operational temperature range		-15°C to +45°C (+5°F to +113°F)
Storage temperature range		-25°C to +60°C (-13°F to +140°F)

Tool Supply (from ROV)

Required supply pressure (continuous operation)	190 barg (2755 psig)
Required supply flow	0 to 80 l/m (0 to 21 g/m)
Operating fluid	Hydraulic oil – ISO 32
Fluid cleanliness level	AS 4059 class 6 B - F

Tool Output/Interfaces

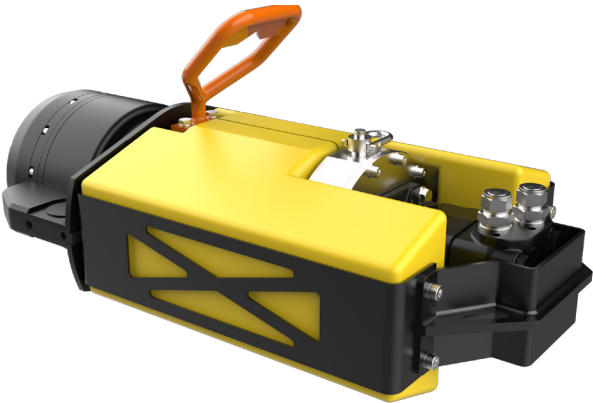
Interface	ISO 13628-8 class 7/API 17H or API 17D (1996)
Maximum rotational speed	4 rpm
Maximum torque output	33 895 Nm (25 000 lbf-ft)
Torque multiplication factor	61:1
Electrical connection	8 pin subconn micro

Key Features

Compact design for easy integration
Integral turns count accurate to 1/153rd of a turn in either direction
Manipulator operable
Anodised aluminium body
Choice of paddle/fishtail/T-bar or ring handle (client specific handle also available at additional cost)
Supplied in a dedicated offshore transit case

Associated Tools

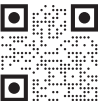
Class 7 Torque Analyser
Torque Tool Control System
High Flow Valve Pack
Subsea Torque and Turns Display (standalone or integrated)



Rear view left



Rear view right



FUGRO.COM/CONTACTS