
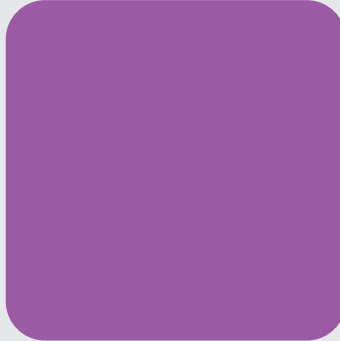
	CONSTRUCTION OF CPF COMPLEX AND DEVELOPMENT OF KANDYM GROUP OF FIELDS	
LUKOIL Uzbekistan Operating Company	Catalogue	

2. ROXAR EMERSON

Roxar CorrOcean Hydraulic Retriever

Double Acting, 6090 psi / 420 bar

Data Sheet



Retrieves coupons and probes under full operating pressure

The Double Acting Hydraulic Retriever accesses internal monitoring equipment installed in pipelines and vessels through hydraulic access fittings, and is ideal for replacing corrosion probes under full line pressure.

The Hydraulic Retriever Kit includes:

- Hydraulic Retrieval Cylinder
- Hydraulic pump (manual or air-driven), hoses and accessories
- Single or double isolation service valve
- Spare seals and maintenance tools
- Transportation cases

Components may be ordered separately.



INTERPRETATION



MODELING



SIMULATION



WELL & COMPLETION



PRODUCTION & PROCESS

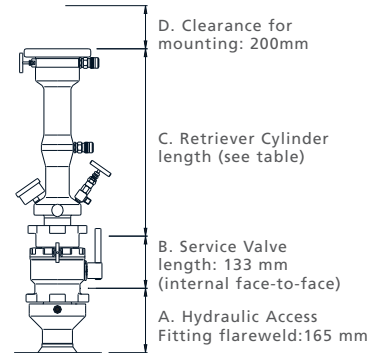
Specifications

Weight and Size - Hydraulic Retriever with **Single Service Valve**

Retriever Kit part no. (Complete with transport case)	12800-130*	12801-200*	12802-300*	12803-400*	12804-500*	12805-600*	12806-700*	12807-800*	12808-900*	12809-1000*
Service Valve Kit part no.	11745	11745	11745	11745	11745	11745	11745	11745	11745	11745
Max. Probe length [mm] using Hydraulic Access Fitting	130	200	300	400	500	600	700	800	900	1000
Max. Probe length [mm] using Hydraulic Adapter	80	150	250	350	450	550	650	750	850	950
Removal Clearance (B+C+D) [mm] (Incl. safety margin)	840	950	1100	1250	1400	1550	1700	1850	2000	2150
Retriever Cylinder length (C) [mm]	506	611	761	911	1061	1211	1361	1511	1661	1811
Retriever Cylinder weight [kg]	19	20.5	22.5	24.5	26	28	29.5	31	33	35
Retriever Kit weight [kg] ** (Incl. Single Service Valve, 14 kg)	58	59.5	61.5	73.5	75	77	78.5	80	82	84

* A, C or M to be added to part no. A is for Air hydraulic pump, C is without pump and M is for Manual hand pump.
Example: 12802-300C

** Weight is for C (without pump). Add 13 kg for A, add 20 kg for M.

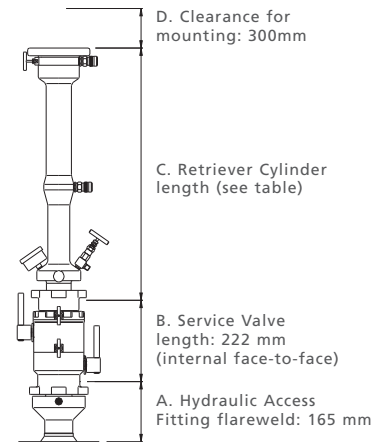


Weight and Size - Hydraulic Retriever with **Double Service Valve**

Retriever Kit part no. (Complete with transport case)	12910-230*	12911-300*	12912-400*	12913-500*	12914-600*	12915-700*	12916-800*	12917-900*	12918-1000*
Service Valve Kit part no.	11742	11742	11742	11742	11742	11742	11742	11742	11742
Max. Probe length [mm] using Hydraulic Access Fitting	230	300	400	500	600	700	800	900	1000
Max. Probe length [mm] using Hydraulic Adapter	180	250	350	450	550	650	750	850	950
Removal Clearance (B+C+D) [mm] (Incl. safety margin)	1250	1350	1500	1650	1800	1950	2100	2250	2400
Retriever Cylinder length (C) [mm]	717	822	972	1122	1272	1422	1572	1722	1872
Retriever Cylinder weight [kg]	21.5	23	25	27	29	30.5	32	34	36
Retriever Kit weight [kg] ** (Incl. Double Service Valve, 21.5 kg)	65.5	69.5	81.5	83.5	85.5	87	88.5	90.5	92.5

* A, C or M to be added to part no. A is for Air hydraulic pump, C is without pump and M is for Manual hand pump.
Example: 12911-300M

** Weight is for C (without pump). Add 13 kg for A, add 20 kg for M.



Distance between hydraulic access fittings should be minimum 300 mm center-to-center.

Additional Technical Information:

Material: - Retrieval Tool cylinder: 17-4 ph stainless steel (Carbon steel retrieval tools also available.)
- Service valve: carbon steel (A182 F22)

Pressure rating: 420 bar/6,090 psi (Contact Roxar if higher pressure rating is required.)

Temperature rating: 200 °C/392°F

Certification: Complete hydraulic access system is certified according to the European Pressure Directive (PED) by Det Norske Veritas.

	Single Service Valve	Double Service Valve
Service Valve weight [kg]	15 kg	21.5 kg
Service Valve Kit weight [kg]	20 kg	26.5 kg
Seal Kit, Service Valve [part no.]	11815	11814
Repair Kit, Service Valve [part no.]	11747-S	11747-D
Valve Ball for Service Valve [part no.]		11744
Seal Kit, Hydraulic Retriever [part no.]		12907
Repair Kit, Hydraulic Retriever [part no.]		12874-2
Air Pump* [part no.]		12791-2
Manual Pump [part no.]		12752-2 / 12753-2**

Check before ordering:

- Available space around pipe
- Required size of retrieval tool cylinder
- Fitting type, e.g. flareweld/flanged fitting
- Probe length, dependent on wall thickness and probe type

The information to the left is for stainless steel Retriever Tool only.
* 85 psi (5.8 bar) air pressure and minimum 12 cfm (340 l/min) is required for operation.
** Pump type and part no. depending on size of Hydraulic Retriever.

Roxar CorrOcean Hydraulic Retriever



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INTERPRETATION



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PRODUCTION & PROCESS

Roxar CorrOcean FSM Online/FSMLog

Non-intrusive, high accuracy corrosion monitoring

Data Sheet



Real time corrosion monitoring – directly on the pipe wall

The FSM Online/FSMLog is a system for non-intrusive monitoring of corrosion in pipelines, process piping and vessels. By inducing an electrical current into strategically located pipe sections, FSM Online monitors changes in the electrical field pattern and indicates early warning at the slightest initial signs of metal loss through uniform and localized corrosion.

The system is comprised of the FSMLog instrument and sensing pin matrixes permanently installed on the monitored object. The FSMLog instrument is normally charged and communicates via the Roxar CorrOcean Field Interface Unit (FIU). FSMLog can be integrated as a combined monitoring system with Roxar CorrOcean CorrLog and SandLog, including options for wireless communication from remote areas.

FSM Online applications include:

- High temperature piping (refineries, chemical plants, etc.)
- Remote, inaccessible and underground pipelines
- Sour production pipes or pipelines
- Low temperature applications on offshore production platforms and transport lines
- Offshore oil and gas production



INTERPRETATION



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Specifications

FSMLog system - Ex version

Low Temp. P/N 18130-n
 High Temp. P/N 18140-n
 Buried P/N 18150-n

FSMLog instrument only P/N 18120-n
 n=64, 128, 192, 256, 320, 384 (number of sensing pins)

Charging: Rechargeable lead batteries via cables from Field Interface Unit (FIU). 2 FSMLog instruments maximum on each cable loop, 2 cable loops maximum on each FIU. FSMLog cannot be integrated with CorrLog/SandLog instruments on the same cable loop. It can, however, be integrated with CorrLog/SandLog in the same FIU on separate cable loops. Power consumption for FIU: 7 W. Field Interface Unit, FIU P/N 22770 is an additional item for a complete system.

Communication: Via cables using CorrOcean proprietary field bus system as described for Charging. Pin (electrode) capacity: 384 pin maximum (64 pin interface cards)

Measurement: 500 measurement capacity. Accuracy and sensitivity depend on application, typically from 0.05% - 0.1% of pipe wall thickness. Ability to detect localized metal loss depends on pin configuration, pipe wall thickness and shape of attack.

Cable connections: Ex e / Ex d Glands

Operating temperature: -40°C to +60°C

Housing dimensions: 618mm x 598mm x 210mm

Weight: 30 kg / 66bs (instrument only, measuring matrix not included)

Mounting: Bolted

Material: Stainless Steel 316

Ex classification (complete system):

II 1G Ex eiamb IIC T4
 (T_{amb} -40°C to 60°C)
 NEMKO 08ATEX1062X

Ingress protection: IP66

FSMLog system - Non-Ex version

Low Temp P/N 18135-n
 High Temp P/N 18145-n
 Buried P/N 18155-n

FSMLog instrument only - non-ex P/N 18121-n
 AC Power/comms P/N 18115-tcpip, 18115-rs485
 DC Power/comms P/N 18116-tcpip, 18116-rs485
 n=64, 128, 192, 256, 320, 384 (number of sensing pins)

For complete order, type of FSM log system and power/communication solution both need to be ordered.

FSMLog instrument is available in a version with direct power, to be used in areas where hazardous area classification does not apply. Specifications same as Ex version, except:

Ex certification: Not applicable.

Charging: Direct power from external power source – no batteries in instrument.

Power requirements: 115/230 V AC, 50/60 Hz, 120 VA
 24 V DC, 120 VA

Communication to PC: TCP-IP or RS485, RS232 possible using direct connection to laptop PC.

Sensing pin matrix – buried and low temperature (up to 120°C)

Temperature rating: - 40C to +120°C

Number of sensing pins: 64, 128, 192, 256, 320 or 384 pins (max) per FSMLog instrument.

Max length from matrix to FSMLog instrument: 10m

Sensing pin matrix – high temperature (up to 500°C)

Temperature rating: +120 C – +500°C

Number of sensing pins: 64, 128, 192, 256, 320 or 384 pins (max) per FSMLog instrument.

Max length from matrix to FSMLog instrument: 5 m

Roxar CorrOcean FSM Online/FSMLog



[WWW.ROXAR.COM](http://www.roxar.com)

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