

Roxar Mechanical Retrieval Tool and Service Valve



Emerson's Roxar Mechanical Retrieval Tool and Service Valve is a high-quality tool for installing and retrieving probes and coupons under full operational pressure. The Roxar Mechanical Retrieval Tool and Service Valve is compatible with most 2" access systems provided by common corrosion monitoring vendors on the market.

The Roxar Mechanical Retrieval Tool and Service Valve has the following features:

- Allows for balanced pressure, which enables easy insertion and retrieval under full operating pressures up to 6,000 psi or 420 bars. The temperature rating is 400 °F/204 °C.
- Provides compatibility with 2" mechanical fittings.
- Comes with a service valve with a built-in bleed off valve that allows tool drainage even on 12 o'clock positions.
- Uses a unique technology on bypass valves with replaceable tips made with a soft material to ensure better performance with lower maintenance costs.
- Meets the NACE MR0175 and the EU Pressure Equipment Directive (PED).

Operating principle

The Roxar Mechanical Retrieval Tool works on a telescopic principle, comprising of a fixed inner barrel, and an outer barrel that moves during operations. The probes and coupon holders are installed or retrieved by pulling or pushing the outer barrel, assuming that there is balanced pressure within the tool.

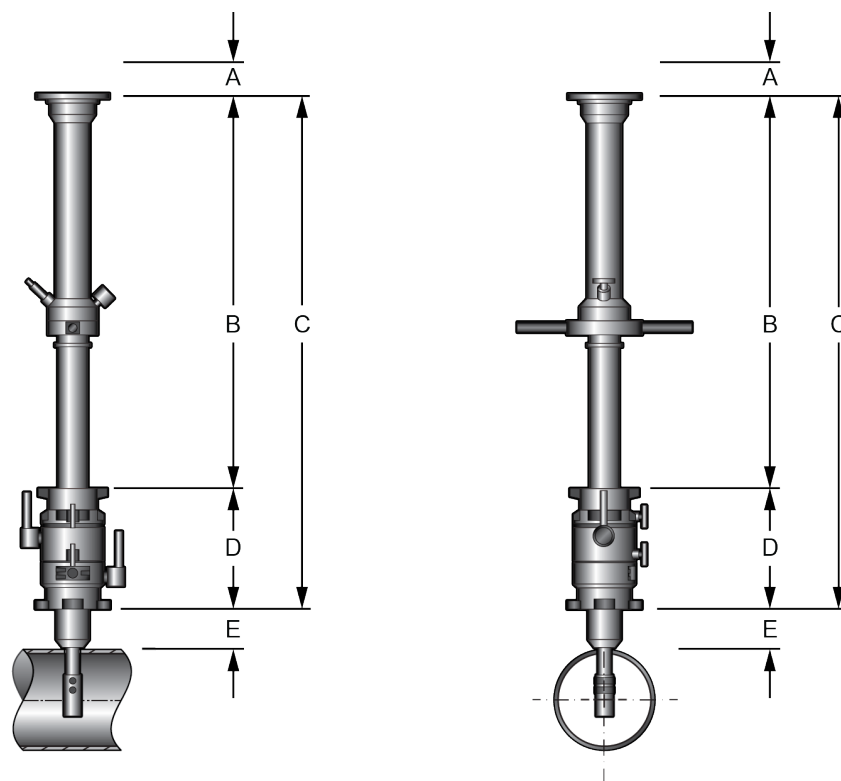
Unlike other tools available in the market, the Roxar Mechanical Retrieval Tool uses a sealing technology that allows the user to disassemble the tool for cleaning purposes, without having to replace the seals.

Note

High pressure retrieval tools must only be operated by trained personnel and according to controlled operating procedures.

Figure 1 shows the dimensions for the Roxar Technical Retrieval Tool and Service Valve.

Figure 1: Roxar Mechanical Retrieval Tool and Service Valve



- A. Clearance for Mounting - 300 mm
- B. Mechanical Retrieval Tool
- C. Mechanical Retrieval Tool, including Service Valve
- D. Service Valve length - 230 mm
- E. Mechanical Access Fitting

Specifications: Mechanical Retrieval Tool and Service Valve

Note

The lengths noted with A and C refer to the items labeled A and C in [Figure 1](#).

Table 1: Mechanical Retrieval Tool with Single Service Valve

Max. Device Length (mm)	150	240	350	425	640	920	1170
Mechanical Retrieval Tool Length extended, including single valve (C)	1160	1340	1565	1710	2140	2700	3200
Removal clearance with single valve (A+C)	1460	1640	1865	2010	2440	3000	3500
Mechanical Retrieval Tool weight (kg)	23.5	25.5	27.5	29.5	34	40	45.5
Retriever kit approximate weight (kg) including single valve (13 kg)	65	67	69	71	75	81	87

Table 2: Mechanical Retrieval Tool with Double valve

Max. Device Length (mm)	150	240	350	425	640	920	1170
Mechanical. Retrieval Tool Length extended, including double valve (C)	1328	1508	1733	1878	2308	2868	3368
Removal clearance with double valve (A+C)	1628	1808	2033	2178	2608	3168	3668
Mechanical. Retrieval Tool weight (kg)	23.5	25.5	27.5	29.5	34	40	45.5
Retriever kit approximate weight (kg) including double valve (22 kg)	74	76	78	80	84	90	96

Components

The Roxar Mechanical Retrieval Tool and Service Valve kit includes the following components:

- Mechanical Retrieval Tool
- Back pressure pump, hose and accessories
- Single or double isolation service valve
- Spare seals and maintenance tools
- Transportation case

Figure 2 shows a back pressure pump. Pumps are designed for manual operation and prevent a surge of pressure during plug removal.

Figure 2: Back pressure pump



Figure 3 shows a Roxar Double Block and Bleed Service Valve that is compatible with 2" access fitting systems commonly used by corrosion and erosion monitoring system providers.

Figure 3: Roxar Double Block and Bleed Service Valve



Figure 4 shows a Roxar Mechanical Retrieval Tool with Service Valve, pump and transport case.

Figure 4: Roxar Mechanical Tool with Service Valve, pump and transport case



Note

Components can be ordered separately.

Model Code Selector - Mechanical Retrieval Tool

Model	Product description
MRT	Mechanical Retrieval Tool

Pressure rating

Code	Pressure rating
1	Maximum 6,000 psi Design Pressure

Tool length

Code	Tool length
L01	Maximum device length: 150 mm
L02	Maximum device length: 240 mm
L03	Maximum device length: 350 mm
L04	Maximum device length: 425 mm
L05	Maximum device length: 640 mm
L06	Maximum device length: 920 mm
L07	Maximum device length: 1170 mm

Tool material (Main components)

Code	Tool material (Main components)
2G6A	Alloy 17-4PH (UNS S17400) Cylinder, ASTM A182 F22 Hammer Nut EN10204 3.1 NACE MR0175

Operating mode and conditions

Code	Operating mode and conditions
01	Standard Viton O-rings
02	Rapid gas decompression FR25/90 O-rings
03	Rapid gas decompression and/or 100% Methanol Elast-O-Lion 101 O-rings

Approvals

Code	Approvals
M	Roxar Standard (no third party approval)
N ⁽¹⁾	PED Compliant Tool

(1) Only available with Tool material (Main components), option 2G6A

Tag plates

Code	Tag plates
ZZ	No tag plates
TG	Standard tag plates

Factory options

Code	Factory options
Z	Standard product

Model Code Selector - Pump for Retrieval Tool System

Model	Product description
PUMP-RT	Pump for Retrieval Tool System

Pump application and operation

Code	Pump application and operation
M3	Manual (back filling only) for MRT

Approvals

Code	Approvals
M	Roxar Standard (no third party approval)

Tag plates

Code	Tag plates
ZZ	No tag plates
TG	Standard tag plates

Factory options

Code	Factory options
Z	Standard product

Model Code Selector - Service Valve

Model	Product description
SRV	Service Valve for Retrieval Tool

Pressure rating

Code	Pressure rating
1 ⁽¹⁾⁽²⁾	Max 6,000 psi design pressure

(1) Not available with Valve Material (Main components) 2G6A

(2) Only available with Operating mode and options 01, 02, 03

Valve design

Code	Valve design
A	Single Isolation Service Valve
B	Double Isolation Service Valve

Valve material

Code	Valve material (Main components)
1B3A	ASTM A182 F22 Main Body, Alloy 17-4PH (UNS S17400) Ball, EN 10204 3.1 NACE MR0175
2G6A	Alloy 17-4PH (UNS S17400), EN 10204 3.1 NACE MR0175

Operating mode and conditions

Code	Operating mode and conditions
	Pressure Rating Code 1 (Max 6,000 psi design pressure)
01	Standard, Viton O-rings, PTFE 25% GF Ball Seat, SS Wave Spring Washer
02	Rapid gas decompression, FR 25/90 O-rings, PTFE 25% GF Ball Seat, SS Wave Spring Washer
03	Rapid gas decompression and/or 100% Methanol, Elast-O-Lion 101 O-rings, PTFE 25% GF Ball Seat, SS Wave Spring Washer

Approvals

Code	Approvals
M	Roxar Standard (no third party approval)
N	PED Compliant Service Valve

Tag plates

Code	Tag plates
ZZ	No tag plates
TG	Standard tag plates

Factory options

Code	Factory options
Z	Standard product

Certificates, tests, calibrations and services

Code	Certificates, tests, calibrations and services (optional) Case for SRV
CT	Case for Service Valve (only when delivered without Retriever Tool)

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