

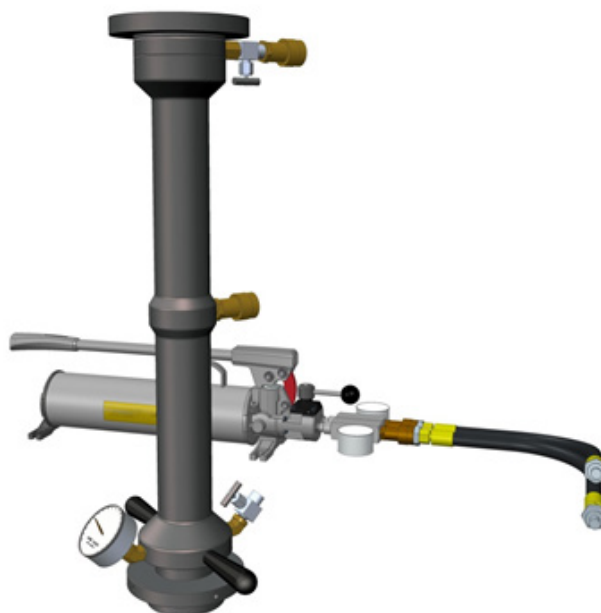
# Hydraulic Retrieval Tool

## for High Pressure Hydraulic Access Systems

In conjunction with other parts of Metal Samples' High Pressure Hydraulic Access System product line (service valves, access fittings, plugs, and covers), the Hydraulic Retrieval Tool allows installation and removal of corrosion monitoring devices in systems under operating pressures of up to 6,000 PSI (41.4 MPa) and temperatures from -15°F to 400°F (-26°C to 204°C).

Hydraulic Access Systems offer multiple benefits over standard Mechanical Access systems, including:

- Absence of an internal thread, which eliminates the possibility of thread galling, as well as problems associated with debris in the threading
- Shorter and lighter overall length and weight
- Requires less operational clearance
- Increased safety (no external moving parts, no telescoping action)
- Increased simplicity of operation



The hydraulic retrieval tool is essentially an enclosed double-acting, 2-stage hydraulic cylinder. This design allows for safe and effortless operation at high pressures, as well as a relatively compact form factor. The hydraulic retrieval tool kit comes with a hydraulic pump (air or manual), and must be used with the hydraulic service valve (single or double isolation). When ordering, the retriever length must correspond to the appropriate probe length and service valve type. If required, the hydraulic retrieval tool can be used on standard 2" mechanical access fittings by using a mechanical-to-hydraulic fitting adapter.

Metal Samples' hydraulic retrieval tools are manufactured from 17-4 PH stainless steel which conforms to NACE MR0175/ISO 15156 standards. These retrieval tools have empty weights of 41 - 57 lbs. (18.3 - 26 kg), depending on the length of the tool.

**Hydraulic Retrieval Tool length selection chart:**

Max Attachment* Length	Single Isolation Valve		Double Isolation Valve	
	Retrieval Tool Length	Part Number	Retrieval Tool Length	Part Number
5.1 in. / 130 mm	19.9 in. / 505 mm	HA104011	-	-
7.9 in. / 200 mm	24 in. / 610 mm	HA104021	-	-
9 in. / 230 mm	-	-	28.2 in. / 717 mm	HA104012
11.8 in. / 300 mm	30 in. / 760 mm	HA104031	32.4 in. / 822 mm	HA104022
15.8 in. / 400 mm	35.8 in. / 910 mm	HA104041	38.3 in. / 972 mm	HA104032
19.7 in. / 500 mm	41.7 in. / 1060 mm	HA104051	44.2 in. / 1122 mm	HA104042
23.6 in. / 600 mm	47.6 in. / 1210 mm	HA104061	50.1 in. / 1272 mm	HA104052
27.6 in. / 700 mm	53.5 in. / 1360 mm	HA104071	56 in. / 1422 mm	HA104062
31.5 in. / 800 mm	59.5 in. / 1510 mm	HA104081	61.9 in. / 1572 mm	HA104072
35.4 in. / 900 mm	65.4 in. / 1660 mm	HA104091	67.8 in. / 1722 mm	HA104082
39.4 in. / 1000 mm	71.3 in. / 1810 mm	HA104101	73.8 in. / 1875 mm	HA104092
43.3 in. / 1100 mm	-	-	79.6 in. / 2022 mm	HA104102

\* Probe / mount and coupon holder