EXNER PROCESS EQUIPMENT

EXTRACT 840M

Manual retractable holder
Technical Information

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1 Product description

1.1 EXTRACT840M manual retractable holder

Components

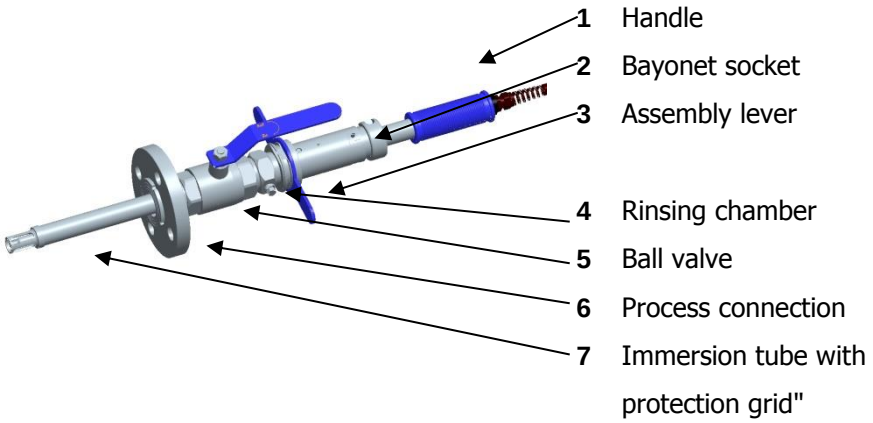


Fig. 1: Retractable holder

Variants

Retractable holders are fixed to containers or pipelines using an appropriate process connection. In order to meet the demands of diverse process characteristics, the EXtract840M retractable holder is made from stainless steel. In addition, you can choose between a variety of process and rinsing connection and seal materials.

EXTRACT840M

The EXTRACT840M valve is a manually operated retractable holder made from stainless steel for installing Ø 12 mm sensors on tanks or pipelines.

- For all Ø 12 mm/120 mm sensors with PG13.5 thread (pH glass and ISFET sensors, conductivity, temperature, turbidity or optical sensors)
- Chemicals
- Water / waste water
- For particularly harsh processes
- With secure ball valve closing

Actuation

Manual actuation of the valve is a mechanical linear actuation which immerses the sensor in the medium through movement of the immersion tube.

Immersion depth The sensor immersion depth can be freely selected using the movable bayonet socket on the immersion tube.

Measuring When the stop position for the "measuring" position is reached, this can by locked using the bayonet socket. In this position, the sensor is permanently mounted on the immersion tube and cannot be withdrawn. The sensor measures the chemical or physical properties of the process fluid.

Servicing The sensor can be removed for cleaning or servicing while the process is running. For this purpose, the valve must be switched to the "service" position.
In order to unlock the bayonet socket, a short movement in the process direction is required. If the process pressure is so high that the immersion tube cannot be manually removed then the sensor cannot be withdrawn without reducing the process pressure.
In the "service" position, the ball valve can be closed thereby safely sealing the sensor off from the process. The sensor can be cleaned in the rinsing chamber without further removal thanks to the rinsing connection.

1.2 Process integration

Transmitter The retractable holder introduces a sensor into the process fluid. The sensor transmits its measurements to a transmitter.

PCS The transmitter can be connected to a process control system. Depending on the measurement results, a rinsing request can be issued which then needs to be carried out manually.

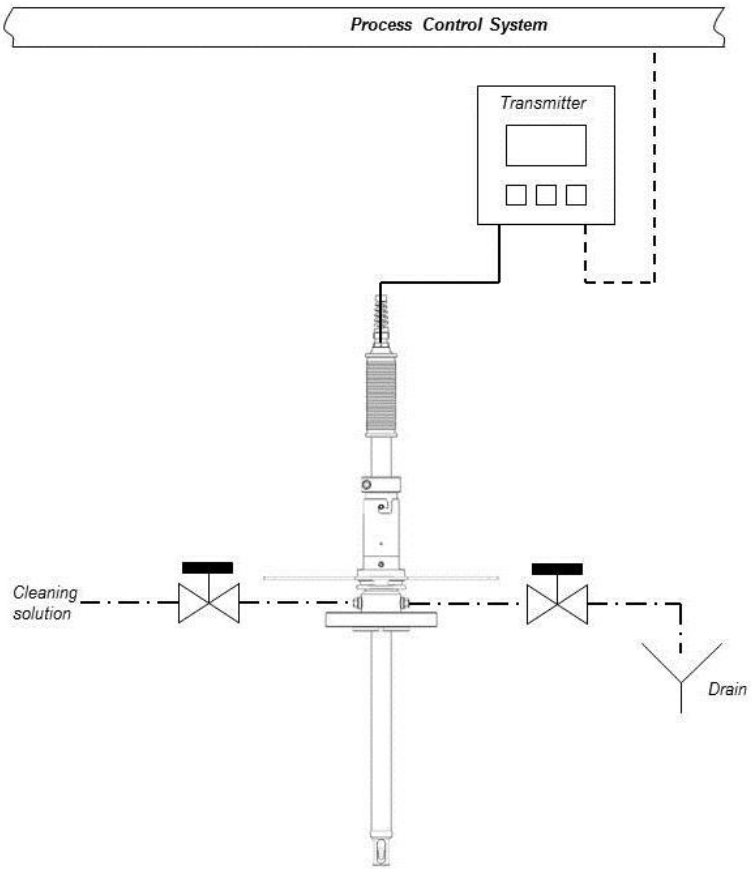


Fig. 2: Process flow

Pressure
Temperature

The pressure and temperature conditions for the process are critical for the selection of the appropriate valve. Depending on the temperature, the retractable holder can be operated up to a pressure of 12 bar, operation is possible to a process pressure of 4 bar! The process temperature must be between -10° and 130°C.

!!! Please observe the pressure and temperature chart in section 8!

Mounting position

In principle, the valve can be operated in any position. In order to obtain reliable measurement results, the properties of the sensor selected are crucial.

2 Operation

2.1 Putting the valve into operation

DANGER!

Risk of injury caused by escaping process fluid!
Burns or chemical burns depending on the properties of the process fluid.
Wear safety glasses and protective clothing!
Check all seals and all connection to the valve before starting the process.

☑ Wear safety glasses and protective clothing when putting the valve into operation!

Make sure of the following before start-up:

Seals are complete and are functioning properly.
Sensor is installed and securely tightened.
Sliding device is installed and securely tightened.
Rinsing connections are closed with blind plugs.
or:
Rinsing lines are installed and closed with valves.

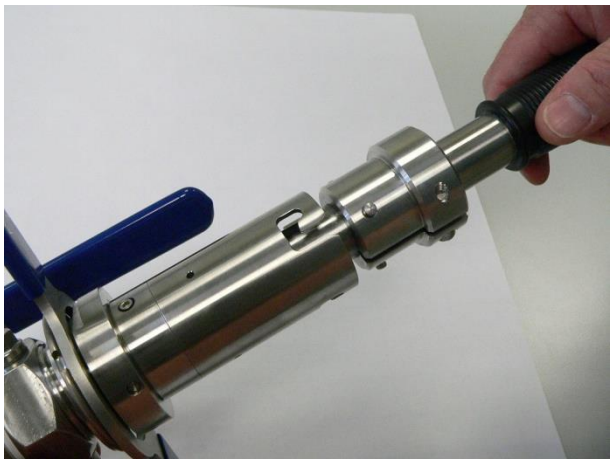
2.2 Switching the valve manually

!!! Wear safety glasses and protective clothing when operating the valve!

- Switch the immersion tube to the "measuring" position

  Open the ball valve fully

Move the immersion tube in the direction of the process by the handle.



Lock the immersion tube in the end position using the bayonet

➢ Move the immersion tube in the "service" position

DANGER!

Under high process pressure, the immersion tube can spring out with a high degree of force!

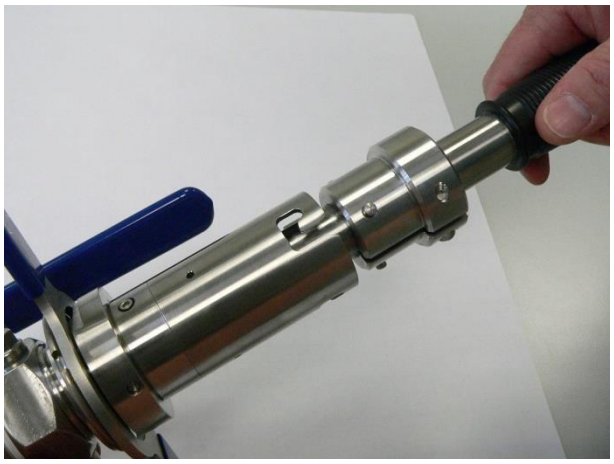
Risk of injury to the user caused by the immersion tube springing out.

Use the bayonet socket carefully

If the bayonet socket can only be pressed against the process using a high degree of force then leave the valve in the "measuring" position and first reduce the process pressure!

Unlock the bayonet socket by pushing it in the process direction first

Move the immersion tube in the service direction by the handle.



Close the ball valve fully

2.3 Removing the sensor

There may be residual fluid in the rinsing chamber when removing the sensor!

DANGER!

Risk of injury caused by escaping process fluid!
Burns or chemical burns depending on the properties of the process fluid.
Wear safety glasses and protective clothing!
Check all seals and all connections to the valve before starting the process.

!!!

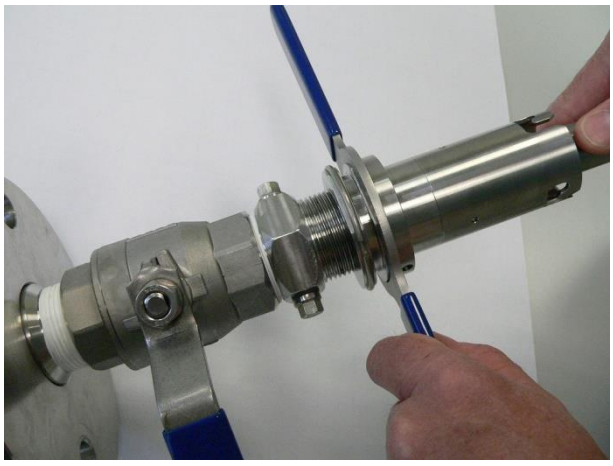
Wear safety glasses and protective clothing when removing the sensor!

Make sure of the following first:

The immersion tube is pulled out of the process up to the stop.
The ball valve is completely closed.

➢ Removing the sensor

Remove the sliding device from the rinsing chamber.
This is done with the aid of the assembly lever.



Unscrew the sensor holder from the immersion tube

Remove the sensor

Re-installation of the sensor occurs in reverse order, cf. section 4.4

3 Technical details

3.1 Standards

Pressure Equipment Directive

3.2 Material properties

Wetted parts			
Material			
EXTRACT	**Valve**	**Ball valve**	**Seals**
840M	1.4404 / 316L	1.4408 / 316L	PTFE EPDM / FPM / FFKM

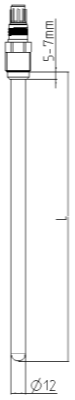
3.3 Rinsing connections

Thread		
without nozzle	-	G $^{1}/_{8}$" (internal)
with nozzle	-	G¼" (internal)
with nozzle	-	NPT ¼" (internal)

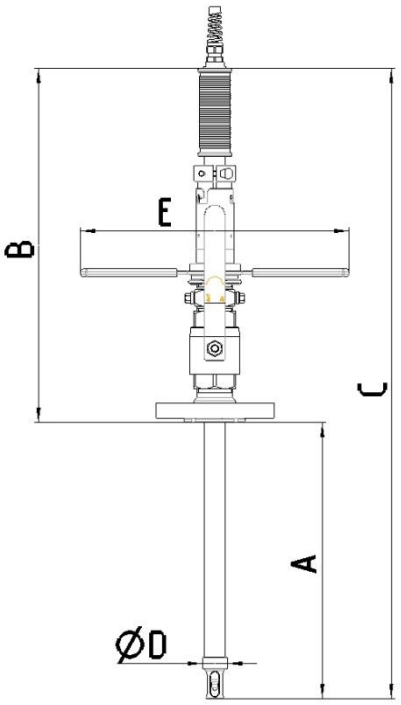
Rinsing pressure	
	1 – 4 bar

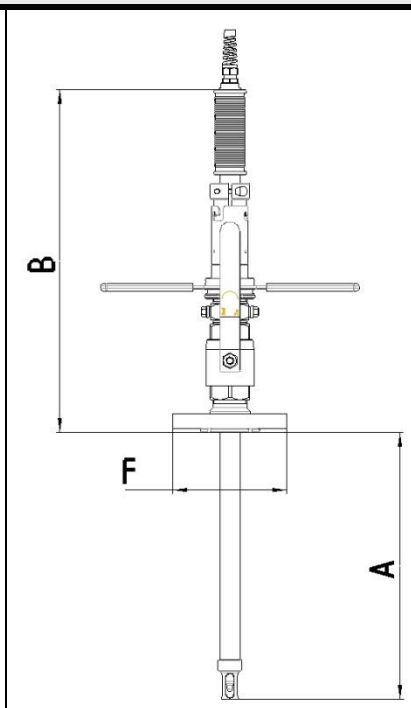
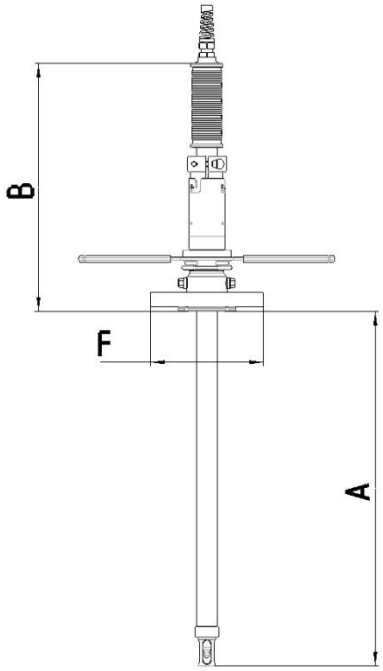
3.4 Sensors

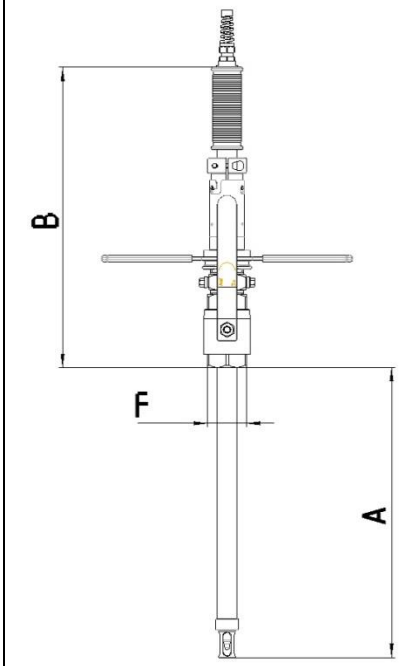
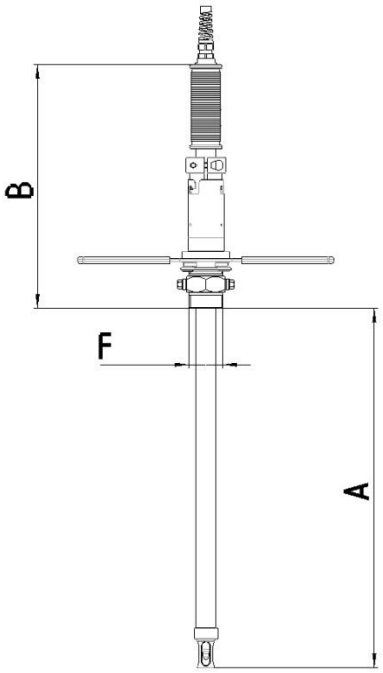
Gel-filled sensor			
EXTRACT	**l [mm]**	**d [mm]**	**PG**
840M	120	12	13.5



3.5 Dimensions

Dimensions		
		
	IMMERSION DEPTH 300 MM	**IMMERSION DEPTH 700 MM**
A [mm]	variable 0 - 300 mm	variable 0 - 700 mm
B [mm]	420 – 880 mm	420 – 1280 mm
C [mm]	750 mm	1150 mm
D [mm]	Ø 30 mm	Ø 30 mm
E [mm]	320 mm	320 mm

Process connection flange				
				
	with ball valve		**without ball valve**	
	ET 300 mm	**ET 700 mm**	**ET 300 mm**	**ET 700 mm**
A [mm] variable	0 - 370 mm	0 – 770 mm	0 – 440 mm	0 – 840 mm
B [mm] variable	420 – 880 mm	420 – 1280 mm	310 – 770 mm	310 – 1170 mm
F [mm]	DN32 PN16 / ANSI1 ¼" 150 lbs		DN32 PN16 / ANSI1 ¼" 150 lbs	

Process connection thread				
				
	with ball valve		**without ball valve**	
	ET 300 mm	**ET 700 mm**	**ET 300 mm**	**ET 700 mm**
A [mm] variable	0 – 370 mm	0 – 770 mm	0 – 445 mm	0 – 845 mm
B [mm] variable	380 – 840 mm	380 -1240 mm	300 – 765 mm	300 – 1163 mm
F [mm]	female G 1 ¼" / NPT 1 ¼"		male G 1 ¼" / NPT 1 ¼"	

3.6 Ambient conditions

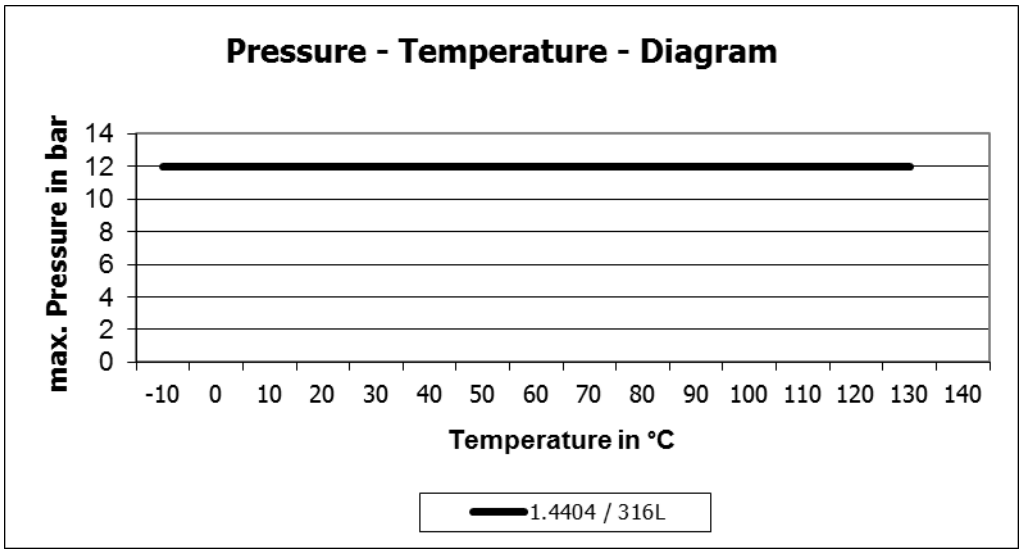
Ambient temperature **- 10 - 70 °C**

Transportation and storage temperature **- 20 - 80 °C**

3.7 EXTRACT 840M process conditions

Max. permissible pressure PS: 12 bar Manually operable up to 4 bar

Max. permissible temperature TS: 130 °C


Pressure - Temperature - Diagram
max. Pressure in bar
14
12
10
8
6
4
2
0
-10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140
Temperature in °C
1.4404 / 316L

3.8 Order structure EXTRACT 840M

Manual retractable holder with ball valve

Code	Material (wetted parts)
4404	Stainless Steel, 1.4404 / 316L
XXXX	Special

Code	Sealing Material (wetted sealings)
EPD	EPDM
FPM	FPM
FKM	FFKM
XXX	Special

Code	Immersion length (nominal)
03	300 mm
07	700 mm
XX	Special

Code	Sensor Type
120	120mm PG 13,5 Gel filled
XXX	Special

Code.	Process Connection
FD32O	Flange DN32 without ball valve
FD32B	Flange DN32 with ball valve
FA14O	Flange ANSI 1 1/4" without ball valve
FA14B	Flange ANSI 1 1/4" with ball valve
G14MO	Thread G1 1/4" male without ball valve
G14FB	Thread G1 1/4" female with ball valve
N14MO	NPT M 1 1/4" male without ball valve
XXXXX	Special

Code	Cleaning Connection
G18	G 1/8" thread female
G14	G 1/4" thread female
N14	1/4" NPT female
XXX	Special

EXTRACT840M	-		-		-		-		Ordercode

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