

Liquid Sampler

Mechatest® ECO-Sampler

General Description

Due to the growing interest of manual samplers Mechatest designed the ECO-line Liquid Sampler.

This sampler is an economical answer to other type liquid samplers but now designed for standard laboratory sample bottles.

The ECO-line liquid sampler is a typical “needle” sampler concept for closed loop and emission free sampling of toxic, dangerous or volatile liquids. The modular design has a lot of advantages, can be used with independent sample and vent needles, standard Schott Duran bottles and is suitable on all kind of liquid sampling applications.



Safety sleeve (optional)

Benefits

- Closed Loop and Emission Free Sampling
- Safer for the operator and environment
- Safer for the sample
- Easy in operation and Low maintenance

The Mechatest Sampling Systems are widely used and accepted among the leaders in the chemical, petrochemical, pharmaceutical and energy industries.

Your Advantages

- Body (standard 316 SS wetted parts) also available in exotic materials.
- Replaceable Needle assemblies for Process and Vent needle, independent to choose in smaller or larger sizes. Needles made of small bore full hard temper tubing SS316, standard with very sharp Lancet style pointer, automated machined for long lifetime.
- Replaceable seats for the needles and in a width range of materials available.
- Replaceable bottle holder makes the sampler very flexible, possibility to change later from bottle volume.
- Bottle holders are designed for Schott Duran bottles with screw cap and septum in volumes of (25) 50, 100, 250, 500, (750) and 1000 ml. Bottle adapter available for Dopak bottles.
- Spring Return Handles available for Swagelok and Hoke ball-valves.
- Option for second bottle retaining clip and use the sampler with two kind of bottle volumes.
- Option for Process Needle Purge.

Sampler Configurator

Build an ECO-line Liquid Sampler ordering number by combining the designators in the sequence shown below.

Designators

4 **5** **6** **7** **8** **9** **10** **11** **12**

Example Ordering No.

ECO- 1 1 2 0 3 0 0 V X

4 Body Material

- 1 = 316 SS (Std.)
- 2 = Duplex
- 3 = Alloy HC-276
- 4 = Monel 400

5 Sample Bottle Volume⁽¹⁾

- 1 = 50 ml
- 2 = 100 ml
- 3 = 250 ml
- 4 = 500 ml
- 5 = 1000 ml
- x Other volumes on request
Bottle holder "Dopak" available
- S Add "S" for Safety sleeve (for example 4S)

6 Process Needle Size

- 1 = 1.5 mm O.D. (I.D. = 1.1 mm)
- 2 = 2.0 mm O.D. (I.D. = 1.5 mm)
- 3 = 3.0 mm O.D. (I.D. = 2.5 mm)
- 4 = 4.0 mm O.D. (I.D. = 3.5 mm)
- 5 = 5.0 mm O.D. (I.D. = 4.0 mm)

7 Process Needle Length

- 0 = 30 mm (Std.) Other length on request

8 Vent Needle Size

- 2 = 2.0 mm O.D. (I.D. = 1.5 mm)
- 3 = 3.0 mm O.D. (I.D. = 2.5 mm)
- 4 = 4.0 mm O.D. (I.D. = 3.5 mm)
- 5 = 5.0 mm O.D. (I.D. = 4.0 mm)

9 Vent Needle Length

- 0 = 25 mm (Std.) Other length on request

10 Needle Point Style

- 0 = Lancet Point (Std.)

① The needles are available in 316SS (std.), Duplex or Hastelloy C22.

11 Seal Material (Needles)

- V = Viton® (Std.)
- K = Kalrez®
- B = Buna-N

12 Options⁽²⁾

- X = No Options
- B = Panel Mounting Bracket 316 SS
- N = NACE Sour Sample Service
 - ① The liquid sampler is available for sour sample service, all wetted parts in accordance with NACE MR0175 / ISO 15156.
- P1 = Process Needle Purge
 - ① Removes sample, eliminates plugging and permits representative sample. The Purge-system will provided with blockvalve, pressure regulator and checkvalve.
- P2 = Process Back Purge
 - ① For back purge the sample point and line, ensure representative sample. The Purge-system will provided with blockvalve, pressure regulator and checkvalve.
- R = Reducing Sleeve
- R2 = Sleeve for 50 ml bottle in 100 ml sampler
- R3 = Sleeve for 50 ml bottle in 250 ml sampler
- R4 = Sleeve for 50 ml bottle in 500 ml sampler
- R5 = Sleeve for 50 ml bottle in 1000 ml sampler
- S = Second Bottle Retaining Clip for 500 ml (drain)bottle
 - ① Only in combination with the 100 or 250 ml sample bottle.

(1) The Mechatest ECO-line sampler is designed for Schott-Duran sample bottles with screw cap and septum.

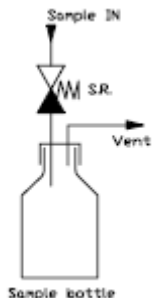
Mechatest offers two types of bottle sleeves:

- Bottle sleeve GL 32 for 50 ml sample bottles.
- Bottle sleeve GL 45 for 100, 250, 500 and 1000 ml sample bottles.

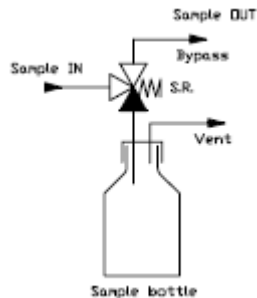
Select from the designator the number for which bottle volume you like to use.

(2) Select from the "options" designator one or more options and fill in all these letters in the same column.

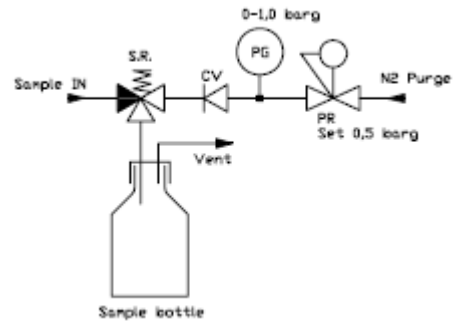
Typical Sampling Configurations



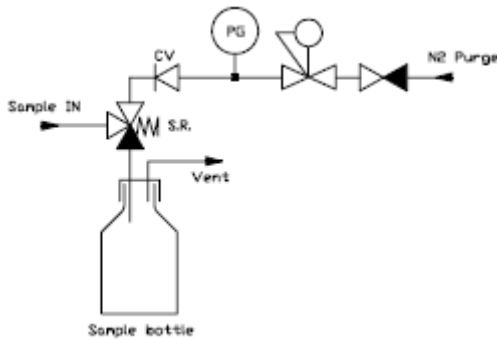
ON/OFF



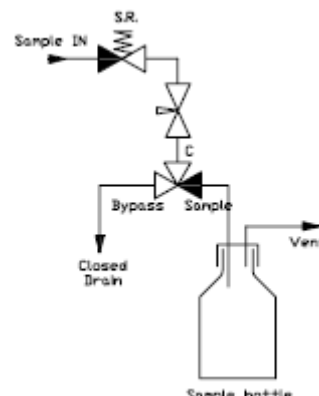
Bypass



Needle Purge



Sample Back Purge



Reducing Pressure/Flow



Typical In-line Liquid ECO Sampler with Needle Purge
(flow thru sampler, also available with for Dopak bottle)



Reducing Sleeve 50 ml Bottle in 500 ml Sampler