

**SmartLC: low consistency transmitter and SmartLC U : ultra low consistency transmitters are used in Pulp and Paper mills for consistency monitoring and consistency control applications like save all filter applications, filtrate measurements, short circuit applications and effluent plant measurement applications. SmartLC is insensitive to brightness, dyes or freeness. SmartLC measures total solids, fiber and filler content.**

**Applicability:**

- Screened pulps
- Max. limit of filler: Consult Metso Field Systems

**Consistency range:**

- 0 to 1.5 %Cs (0 – 15 g/l) SmartLC
- 0 to 0.2 %Cs (0 – 2 g/l) SmartLC U

**Span:**

- min. 0.2 %Cs (2 g/l) SmartLC
- min. 0.03 %Cs (300 mg/l) SmartLC U

**Sample flow rate:**

- min. 4 liters/minute (1.1 USGPM)
- max. 30 liters/minute (7.9 USGPM)

**Damping:**

- Adjustable 1 to 60 seconds

**Output signal:**

- 4 – 20 mA + HART®
- Measurement update each 300 ms

**Power supply:**

- 115/230 VAC ±10 %, 49 – 61 Hz

**Load capacity:**

- 0 – 600 Ω
- HART® requires min. 250 Ω load resistance.

**Process pressure:**

- max. 6 bar (87.1 psi)

**Operating conditions:**

- Ambient temperature -20 to 60°C (-4 to 140°F)
- 0 to 95% R.H. (no condensation)
- Process 20 to 80°C (68 to 176°F)
- Storage -20 to 80°C (-4 to 176°C)
- Vibration max. 2 g / 100 – 500 Hz

**Performance:**

- Repeatability  
0.01 %Cs SmartLC  
0.0015 %Cs SmartLCU
- Effect of process temperature:  
max. 0.1 % Cs / 10°C SmartLC  
max. 0.015 % Cs / 10°C SmartLCU

**Materials:**

- Transmitter's electronics housing: Aluminium alloy
- Parts directly exposed to humidity: AISI 316L
- Measurement cell: borosilicate glass
- Operator unit: Polycarbonate
- Plastic tube: FEP ½" length 5m (16.4 ft)



**Enclosure class:**

- operator unit IP 65
- transmitter IP 66 (Nema 4X)

**Mounting:**

- To a sample line branched from the main process flow using ½" // 3/8" plastic or rubber hose

**Electric connections:**

- Terminals in operator unit
- Housing equipped with sealed inlet bushings

**EMC test standards:**

- Emittet interference: EN50081-1: 1992
- Reference standard: EN55022: 1998 / Class B
- Interference immunity: EN61000-6-2: 1999
- Reference standards: EN61000-4-2, -3, -4, -5, -6, -8, -11

**Backflushing unit**

**Pressurized air supply:**

- 4 to 7 bar (58 to 101.5 psi)

**Flushing water supply:**

- max. 7 bar (101.5 psi) min. 1 bar (14.5 psi) higher than process pressure. Temperature difference between flushing water and process max. 20°C (36°F).
- In white water applications the flushing water temperature must be higher than process temperature.

**Backflushing water supply line and sample line size:**

- 3/8"

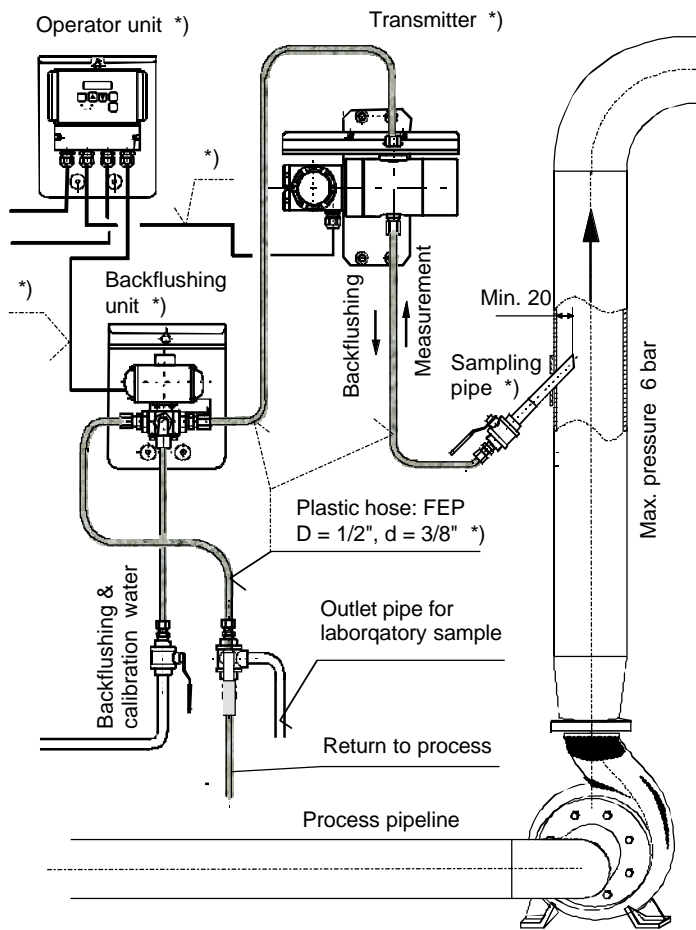
**Backflushing timing:**

- Flushing time: Adjustable 10 to 300 s
- Flushing interval: Adjustable 1 to 600 min

**Weights:**

- transmitter 4.6 kg (10.1 lb)
- operator unit 1.5 kg (3.3 lb)
- backflushing unit 3.2 kg (7 lb)

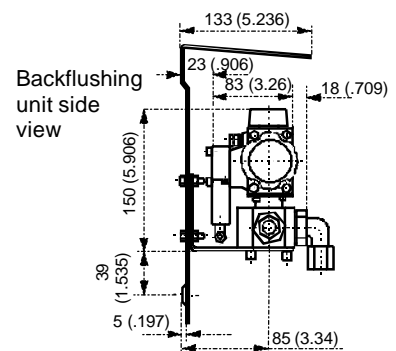
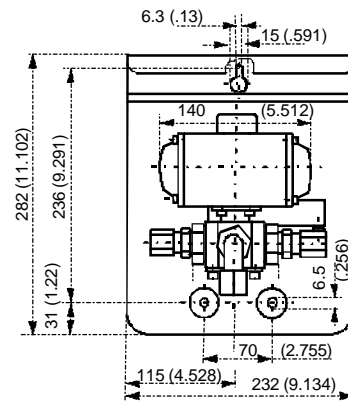
## SmartLC Installation principle



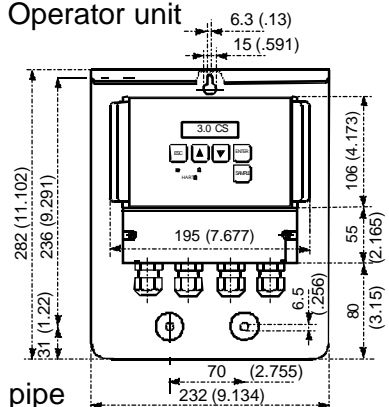
\*) Content of delivery: Transmitter, backflushing unit, operator unit, plastic hose FEP 1/2" length 5 m, sample pipe, sample pipe valve, connectors, hose couplings, supports and connector nuts.  
Operator unit comes with a connected transmitter cable, length 10 m (33 ft).  
A cable to the operator unit, length 10 m (33 ft), is connected to the solenoid valve of the backflushing unit.

## Dimensions

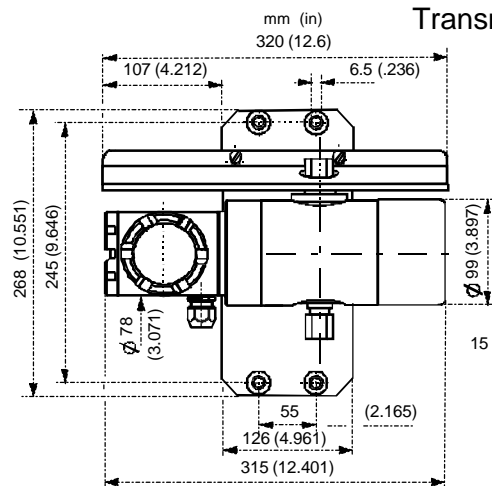
### Backflushing unit



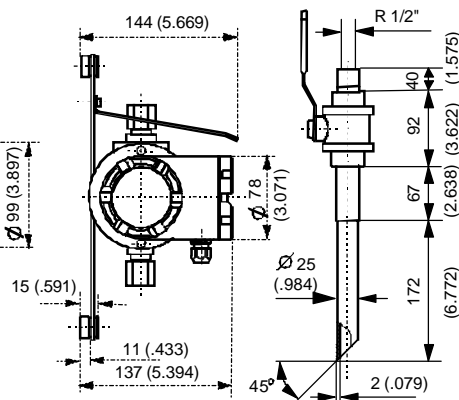
### Operator unit



### Transmitter



### Sample pipe



### Operator unit side view

