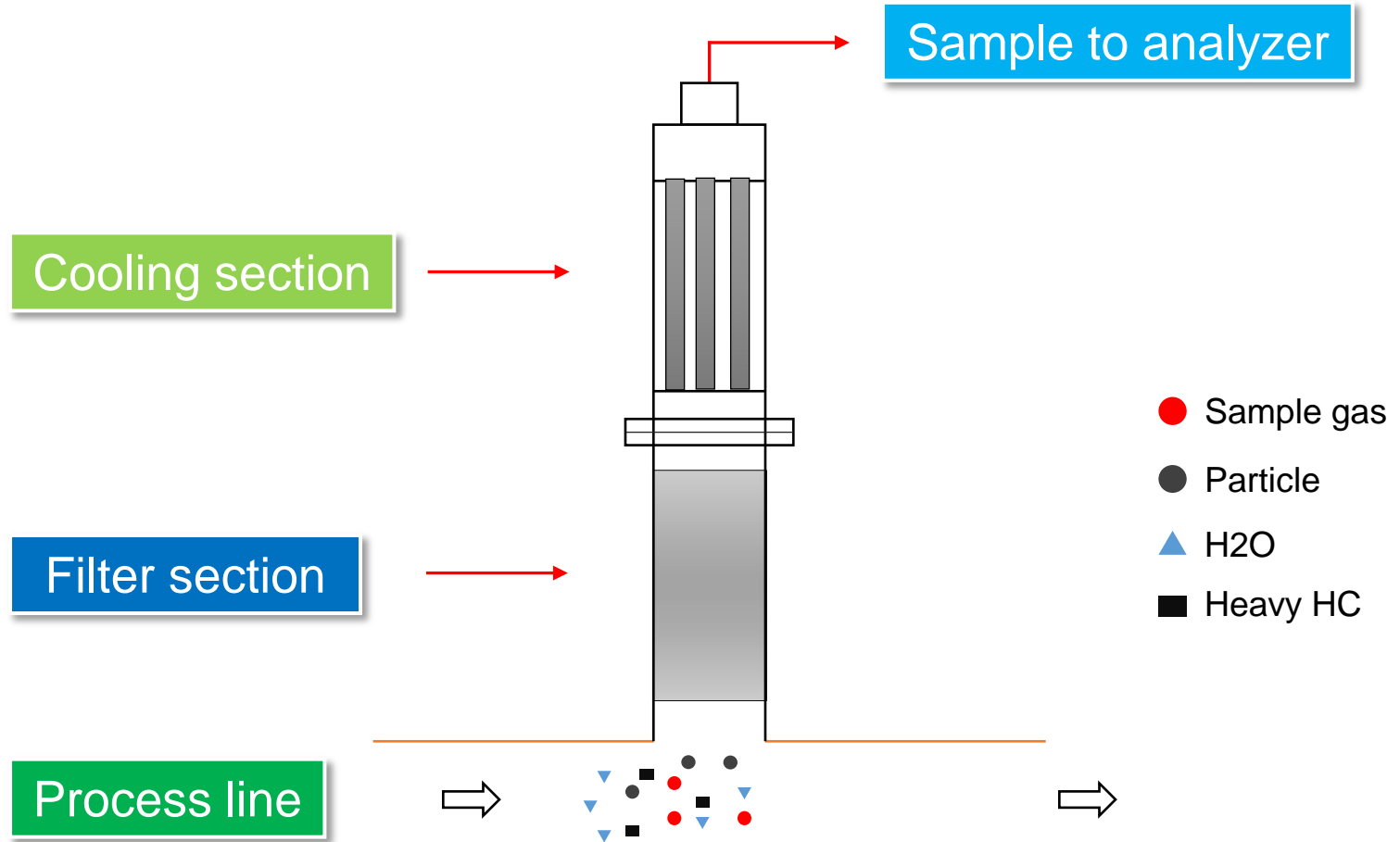# Py-Gas Sampler
by TAECHIN SMET

Oct. 2014

Py-Gas Sampler

Reflux Sample Conditioner

Basic Principal

The Py-Gas pyrolysis sample conditioner is typically used on applications where it is difficult to transport a raw sample that is hot or dirty without creating problems with the condensable, polymers, and particulates in the stream.

Applications

The Py-Gas is an online sample conditioner designed for

difficult sample conditioning situations such as the following.

- Liquid mists or water removal

- Heavy particulate removal

- Fine carbon removal

- Hot and dirty gases

- Pyrolysis gases

- Wet, dirty gases

ThermoFisher
S C I E N T I F I C

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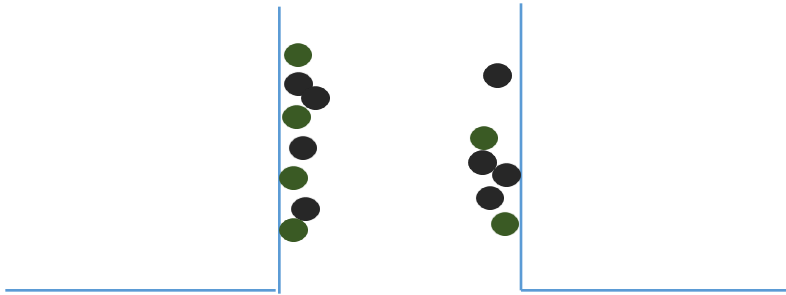
Upgraded feature

Upgraded feature No. 1 (Cyclone generator unit is added)
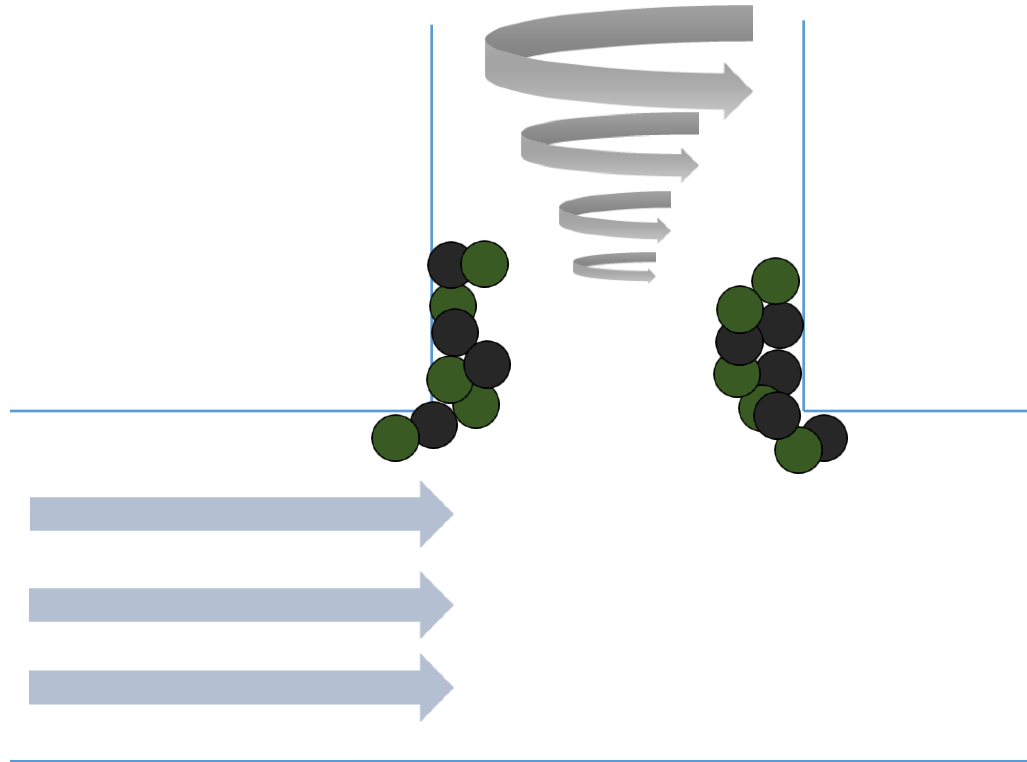
At the bottom of filter section, a new steam injection unit is added.
When injecting steam to the process line, it creates a cyclone effect which prevents the compounds like tar, oil and heavy particles from being plugged to the corner of process line and process tap

Upgraded feature

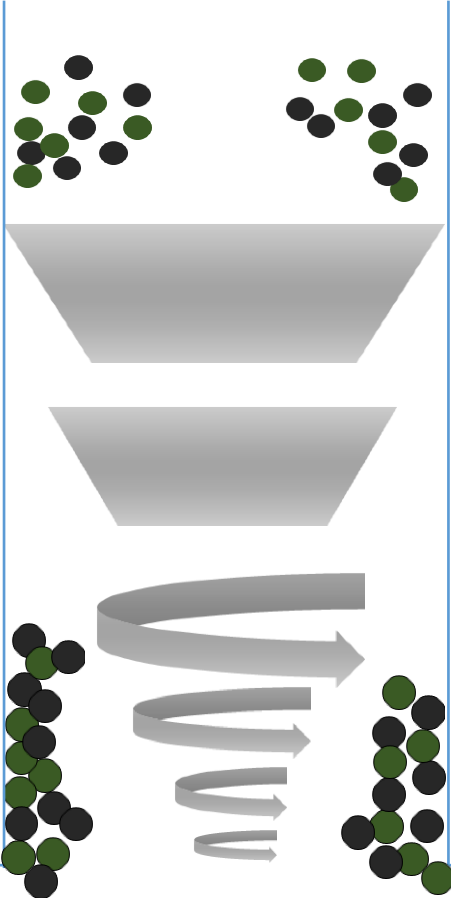Upgraded feature No. 2 (Double cone unit is added)

OLD PYGAS
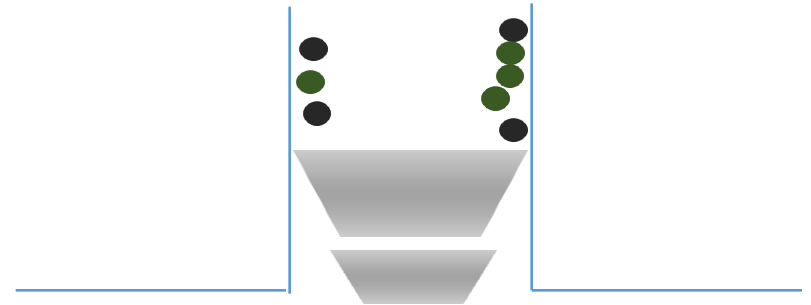
NEW PYGAS

By applying cone shaped unit to the filter section, the high viscosity compounds(flow slag) will fall directly into the process line not sticking to the wall

The Leader in Analysis Packages

Summary

Upgraded feature No. 2
Double cone unit is added

Filter section

Upgraded feature No. 1
Cyclone generator unit is added

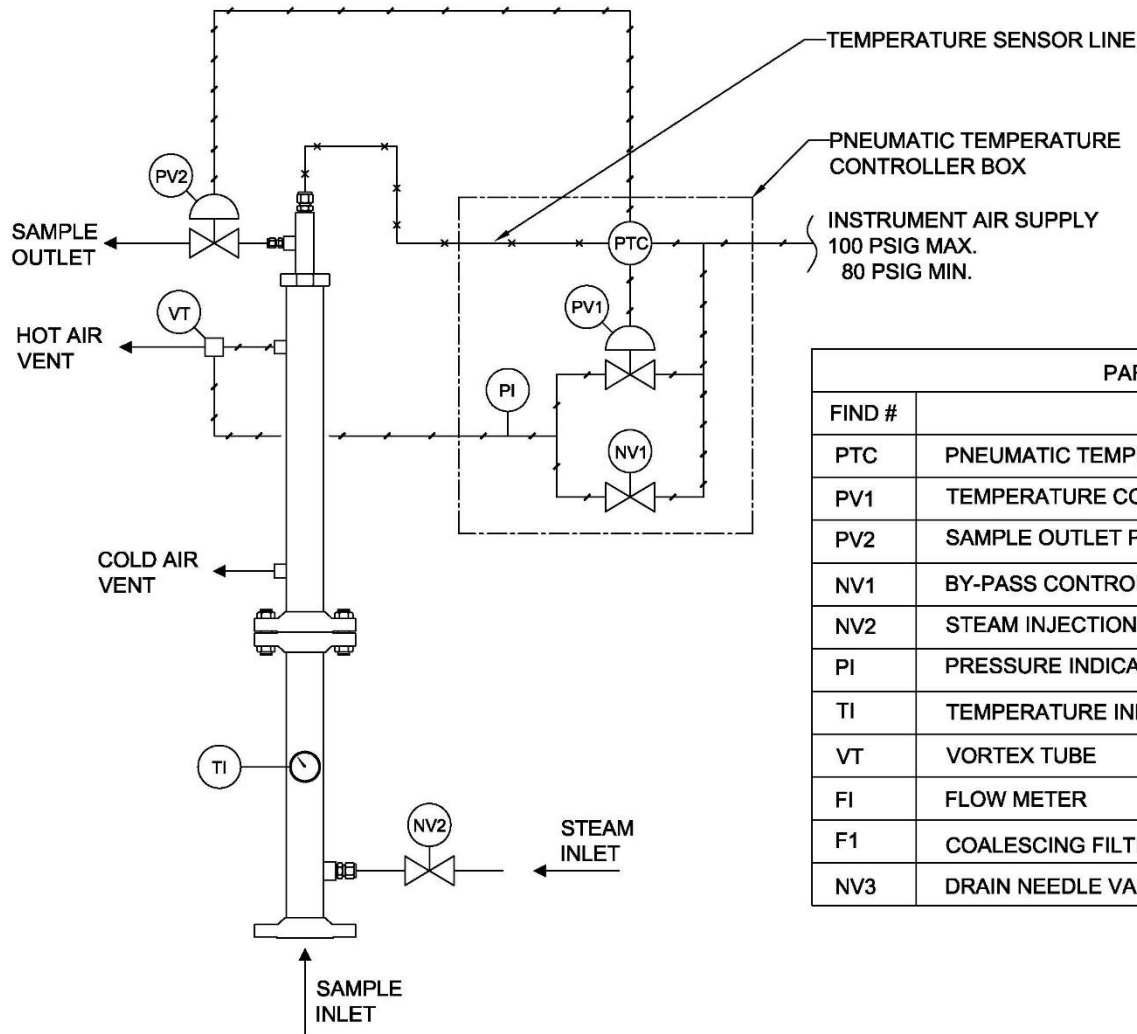Process line

Drawing
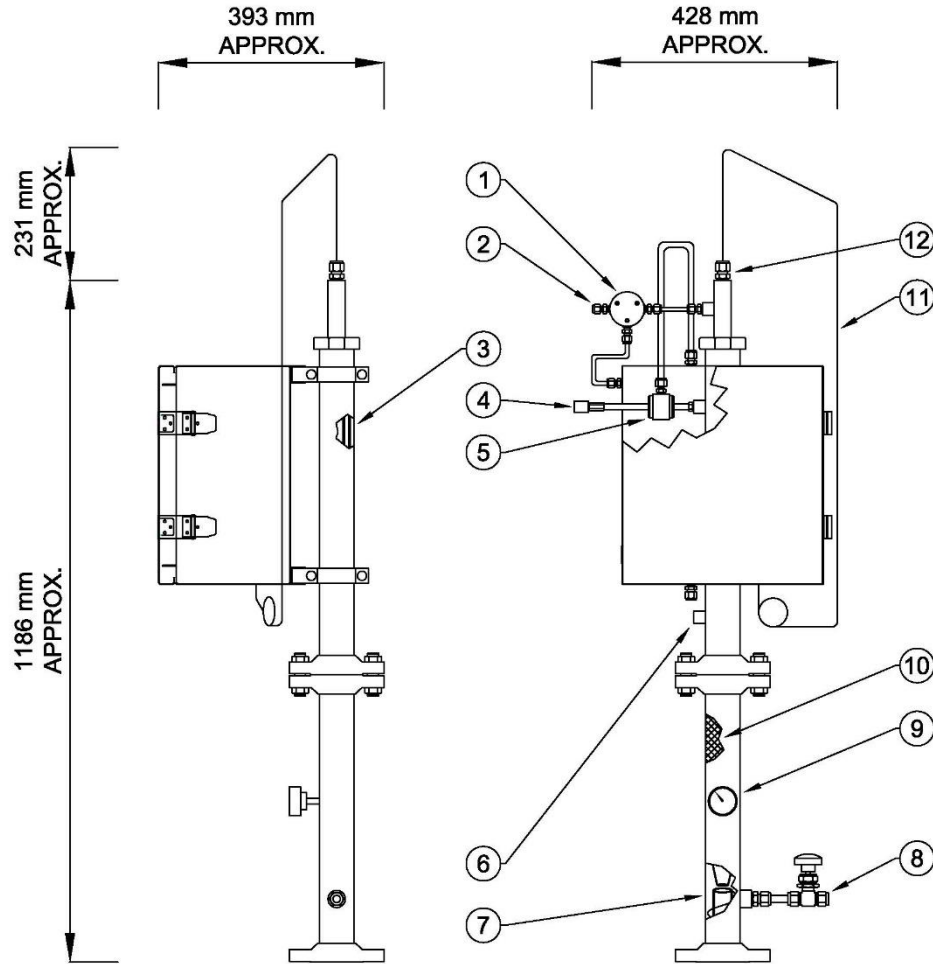
ITEM	DESCRIPTION
1	SAMPLE OUTLET PNEUMATIC VALVE, 2 WAY, NC
2	SAMPLE OUTLET CONNECTION, 1/4" TUBE
3	TUBE PACKING, WELDING RODS
4	HOT AIR VENT
5	VORTEX TUBE
6	COLD AIR VENT
7	DOUBLE CONE UNIT, CYCLONE STEAM UNIT
8	STEAM INJECTION NEEDLE VALVE, 1/2" TUBE
9	TEMPERATURE INDICATOR
10	FILTER ELEMENT
11	CAPILLARY SENSOR LINE
12	UNION SEAL, CONAX FITTING

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Drawing

TEMPERATURE SENSOR LINE

PNEUMATIC TEMPERATURE
CONTROLLER BOX

INSTRUMENT AIR SUPPLY
100 PSIG MAX.
80 PSIG MIN.

SAMPLE OUTLET

HOT AIR VENT

COLD AIR VENT

SAMPLE INLET

STEAM INLET

PARTS LIST	
FIND #	DESCRIPTION
PTC	PNEUMATIC TEMPERATURE CONTROLLER
PV1	TEMPERATURE CONTROL PNEUMATIC VALVE, 2 WAY, NC
PV2	SAMPLE OUTLET PNEUMATIC VALVE, 2 WAY, NC
NV1	BY-PASS CONTROL NEEDLE VALVE
NV2	STEAM INJECTION NEEDLE VALVE
PI	PRESSURE INDICATOR
TI	TEMPERATURE INDICATOR
VT	VORTEX TUBE
FI	FLOW METER
F1	COALESCING FILTER KNOCK-OUT
NV3	DRAIN NEEDLE VALVE

Comparison of PG Series

PG3000   PG5000   PG6000   PG7000
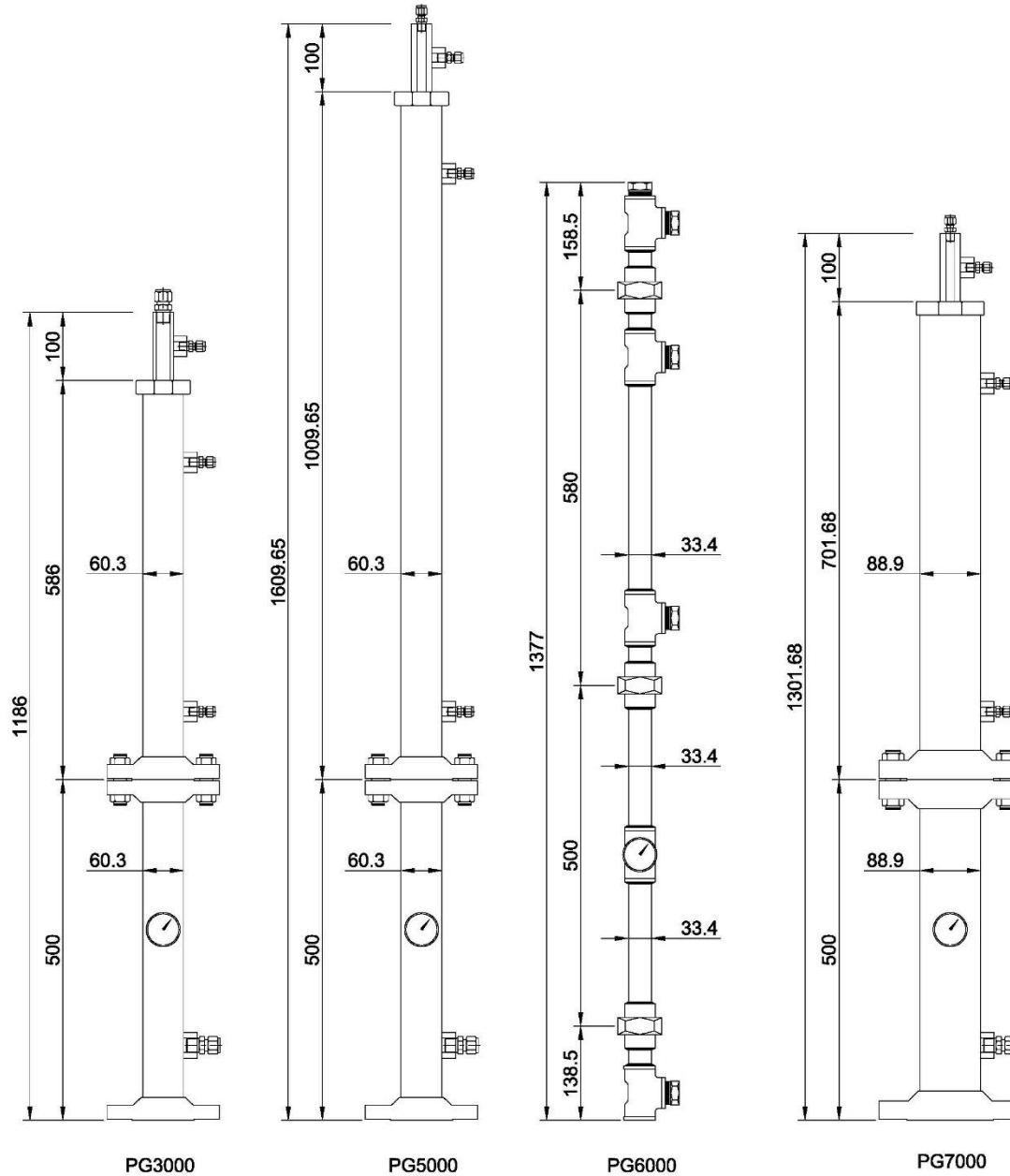
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Thank You