CONTROVAL

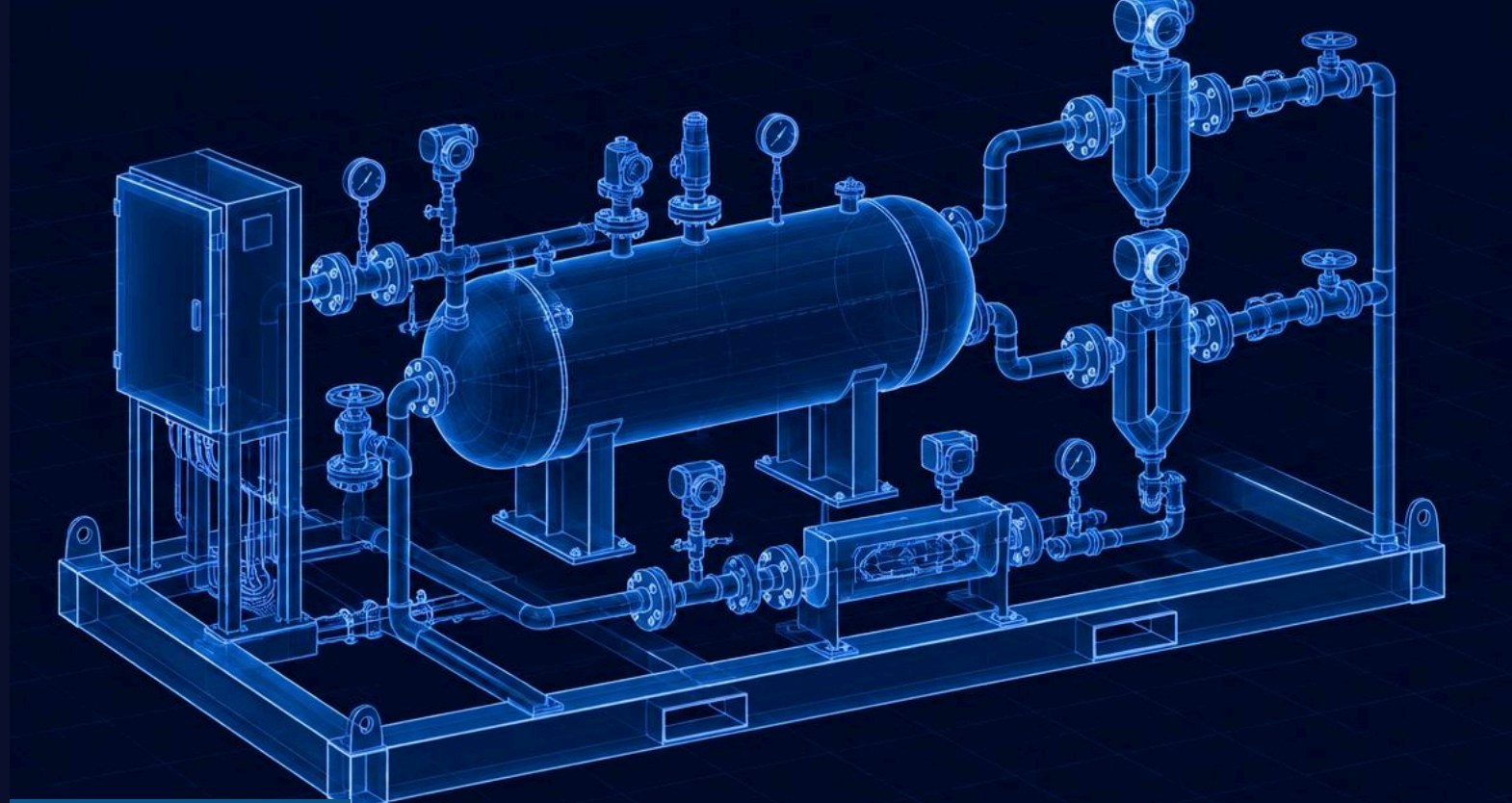
TECHNICAL DATA SHEET

METERING AND TRANSFER

Well test skids

A compact test separator, Coriolis measurement and data logging on one portable skid, to measure what each well produces.

NEW CONCEPT · TEST SEPARATOR · CORIOLIS · WATER CUT · DATA



Well test skid, 3D design

AT A GLANCE

Know what each well produces, without building a test station.

01
Compact test separator, 2- or 3-phase

02
Coriolis metering of the liquid and gas outlets

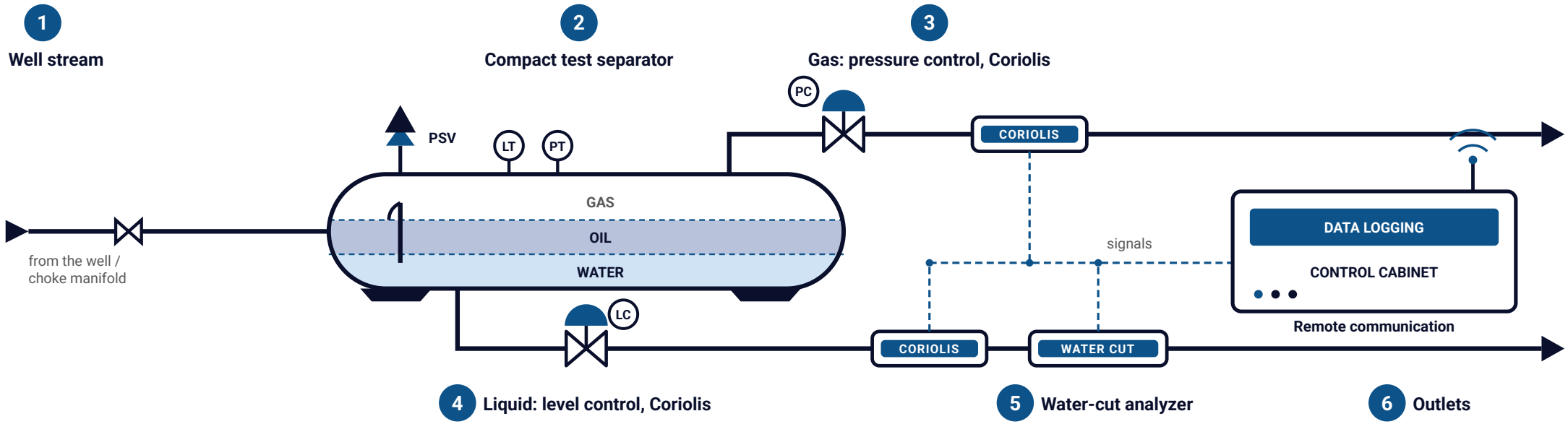
03
Water-cut analysis for oil and water

04
Control cabinet with data logging and remote communication

How it works

A well test skid separates the well stream and measures the oil, water and gas that come out, so you can test wells one at a time and allocate production. Separator, metering, water-cut analysis and controls come together on one portable skid.

We design the skid around your wells: separator size and phases, metering technology, instrument signals and data logging. Skid or trailer mounting lets you move it from well to well.



Typical schematic configuration, shown for reference only. The final design, equipment, instrumentation and applicable codes depend on the client's process conditions, specification and project requirements, and are defined during engineering.

Step by step

In the order the fluid passes through it.

1 Well stream in

The well stream arrives from the wellhead or choke manifold through an isolation valve. It is a mix of gas, oil and water.

2 Compact test separator

An inlet diverter slows the stream and the gas separates from the liquid. In a 3-phase version, the liquids rest so oil and water also separate by density. A relief valve and pressure and level transmitters protect and monitor the vessel.

3 Gas outlet and metering

A pressure control valve holds the vessel pressure. A Coriolis meter measures the gas before it leaves the skid.

4 Liquid outlet and metering

A level control valve discharges the liquid through a Coriolis meter, which measures its mass flow and density.

5 Water-cut analyzer

The analyzer measures the share of water in the liquid. With the Coriolis reading, it gives the oil and water volumes of the test.

6 Outlets

Gas and liquid leave the skid to the line, the production facilities or the disposal point your site uses, through isolation valves.

▶ CONTROL AND RECORDS

Control cabinet and data

The cabinet collects pressure, level, flow and water-cut signals, logs the test data and raises alarms. Data can go to a remote location by remote communication.

Typical configurations and options

Phases	2-phase or 3-phase compact test separator
Mounting	Skid mounted, or trailer mounted for moving between wells
Design code	ASME VIII Div. 1 pressure vessel
Materials	Carbon steel, or NACE materials for sour service
Gas measurement	Coriolis meter on the gas outlet, with pressure control
Liquid measurement	Coriolis meter on the liquid outlet, with level control
Water cut	Water-cut analyzer on the liquid line
Safety	Pressure relief valve and instrumentation sized to the vessel
Instrumentation	Pressure, temperature and level transmitters and gauges
Control cabinet	Control cabinet with data logging and alarms
Communication	Remote communication, as your site requires
Area classification	Instruments, cabinet and wiring selected for the classified area

Standards and documentation

Designed to ASTM, ASME, ISO and API standards. The applicable codes are agreed per project.

TYPICAL REFERENCES

ASME VIII-1	Pressure vessels: separator shell, heads and nozzles
API 12J	Oil and gas separators
NACE MR0175 / ISO 15156	Materials for H2S-containing (sour) service
API 520 / 521	Pressure relief devices: sizing and relieving systems
API MPMS ch. 5	Metering of liquid hydrocarbons, including Coriolis meters
ASME B31.3	Process piping on the skid

TYPICAL DOCUMENTATION PACKAGE

- ✓ P&ID
- ✓ General arrangement
- ✓ Vessel and instrument datasheets
- ✓ Design calculations
- ✓ Control cabinet drawings and I/O list
- ✓ FAT procedure and report
- ✓ Operation and maintenance manual

Factory acceptance test (FAT) in our workshops and site acceptance test (SAT) at the installation site.

Next step

Engineered to order for your wells

A new addition to our range. Each well test skid is engineered with you for your wells and your site, and tested in our workshops before it ships. Send us the data below and an engineer returns a proposed configuration.

TO SIZE IT WE NEED

Fluid	**Oil, water and gas properties, and any H2S or CO2**
Flow	**Expected gas, oil and water rates per well**
Pressure and temperature	**Operating and design conditions**
Mounting and site	**Skid or trailer, and the area classification**

Need one built for your process?

controval.com

Send us fluid, flow, pressure and temperature, or just your idea. An engineer returns a proposed configuration.

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