CONTROVAL

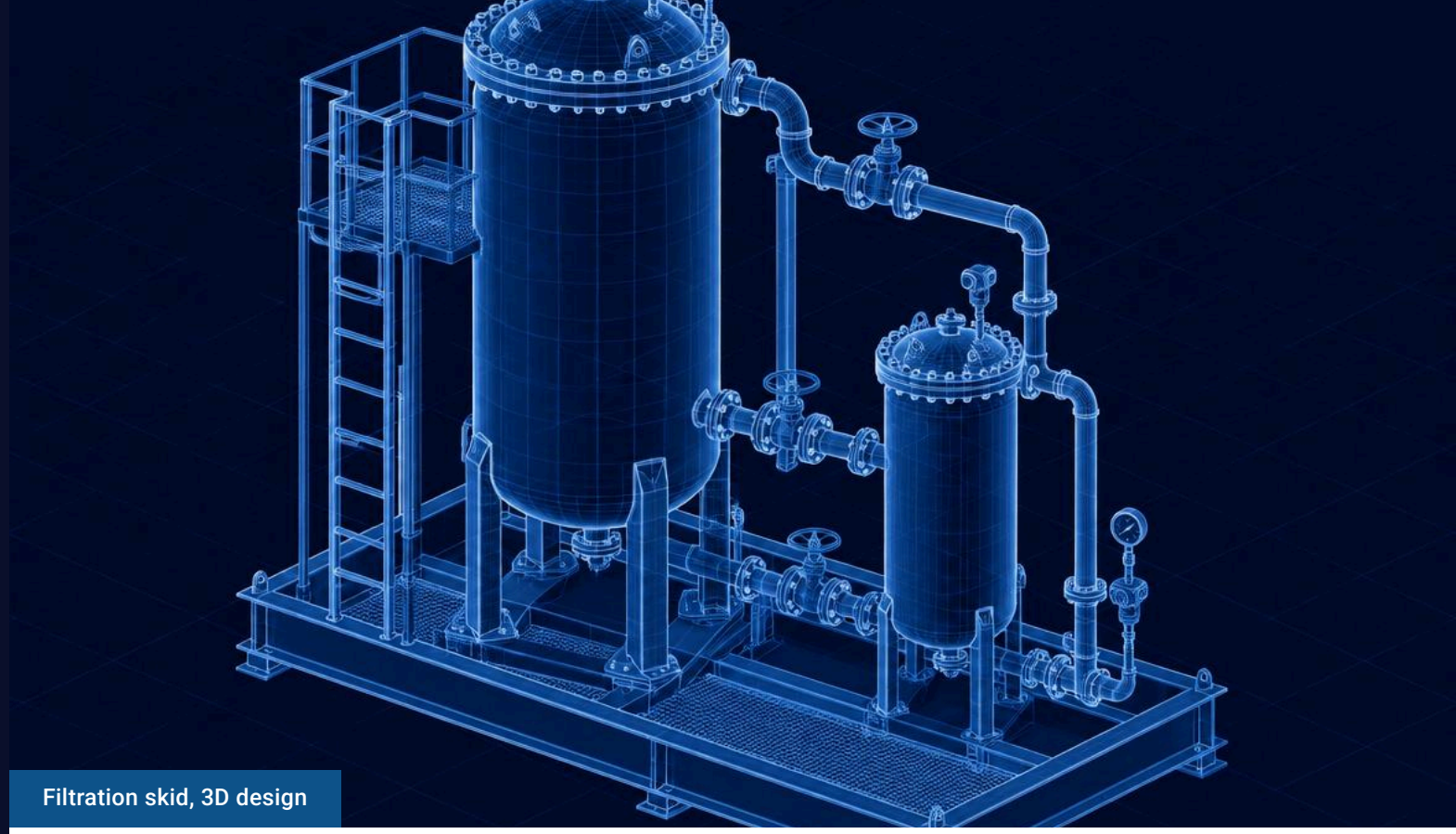
TECHNICAL DATA SHEET

INJECTION AND CONDITIONING

Filtration skids

Filter and coalescer packages that protect your process equipment, built on ASME vessels and supported by Parker, a manufacturer we represent.

NEW CONCEPT · FILTERS · COALESCERS · ASME VIII



Filtration skid, 3D design

AT A GLANCE

Clean fluid in, protected equipment downstream.

01
Filters and coalescers for gas, liquids and lube oil

02
Pressure vessels to ASME VIII Div. 1, fabricated in our workshops

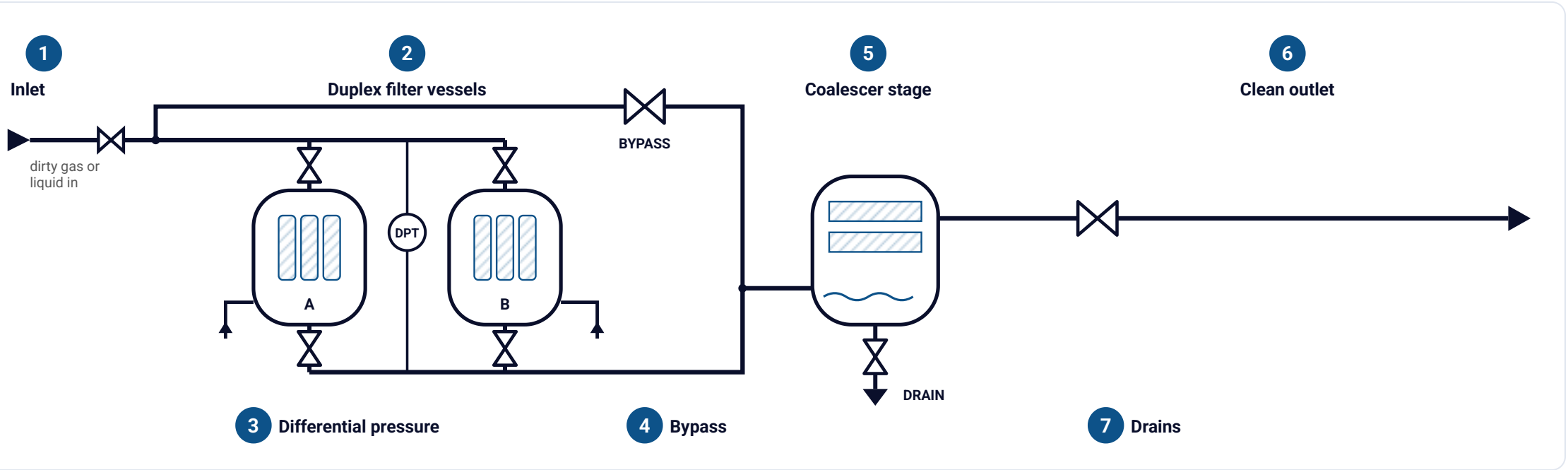
03
Single, duplex or multi-stage arrangements

04
Differential pressure monitoring and bypass

How it works

Filtration skids remove solids and liquids from gas, crude, amine, glycol, lube oil, fuel or water before they reach sensitive equipment. Vessels, filter elements, valves and instruments come together on one skid.

We design the skid around your fluid and flow, fabricate the vessels in our workshops to ASME VIII Div. 1, and build with filtration components from Parker, a manufacturer we represent.



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 Inlet and isolation
The fluid to be cleaned enters through an isolation valve. Its flow, pressure and contaminants set the size and the filtration level.

2 Duplex filter vessels
Filter elements remove solids and larger droplets. With two vessels in parallel, one can stay in service while the other is isolated for an element change.

3 Differential pressure
A differential pressure transmitter reads the pressure drop across the filters. A rising value shows the elements are loading and should be changed.

4 Bypass
A bypass line with a valve lets the flow continue around the filter stage when it has to be isolated. The fluid in the bypass is not filtered, so its use depends on the process; for critical equipment the duplex arrangement is normally preferred.

5 Coalescer stage
A coalescer merges fine droplets or aerosols into larger ones that drain out of the stream, and stops fine particles, to protect equipment downstream.

6 Clean outlet
The clean fluid leaves through an outlet valve to the equipment it protects, such as compressors, turbines, instruments, pumps or bearings.

7 Drains
Liquid and solids collected in the vessels and the coalescer sump go to a closed drain or collection point, by manual or automatic drain.

CONTROL AND RECORDS

Instruments and signals
Differential pressure and other signals go to a local panel for indication and alarms, and can go to your DCS or PLC.



Demineralized water filtration vessel, Monagas
One of ten ASME VIII Div. 1 pressure vessels fabricated in our workshops: five for amine filtration, five for water.

Typical configurations and options

Fluid	Gas, liquid or lube oil, as the application requires
Arrangement	Single, duplex or multi-stage
Stages	Filter stage, with coalescer stage as the fluid requires
Vessels	ASME VIII Div. 1 pressure vessels, fabricated in our workshops
Filter elements	Parker filtration components, selected for the fluid and the filtration level
Materials	Carbon steel, stainless steel, or NACE materials for sour service
Monitoring	Differential pressure transmitter and gauges
Bypass	Bypass line with valve, as the process requires
Drains	Manual or automatic drains to a closed drain
Safety	Pressure relief valve sized to the vessel, where required
Instrumentation	Local indication, with signals to a panel, DCS or PLC
Area classification	Instruments 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 (filter and coalescer housings)
ASME B31.3	Process piping
API 520 / 521	Relief devices, and pressure-relieving and depressuring systems
NACE MR0175 / ISO 15156	Materials for H2S-containing (sour) service
ASME B16.5	Pipe flanges and flanged fittings
ASME IX	Welding and brazing qualifications
ISO 4406	Coding of fluid cleanliness, where a cleanliness level is specified

TYPICAL DOCUMENTATION PACKAGE

- ✓ P&ID
- ✓ General arrangement
- ✓ Vessel and instrument datasheets
- ✓ Design calculations
- ✓ 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 fluid

A new addition to our range. Each filtration skid is engineered around your fluid and flow, built with vessels fabricated in our workshops, and tested before it ships. Send us the data below and an engineer returns a proposed configuration.

TO SIZE IT WE NEED

Fluid	**Gas, liquid or lube oil, its properties and contaminants**
Flow	**Normal and maximum flow rate**
Pressure and temperature	**Operating and design conditions**
Filtration level	**Target cleanliness, arrangement (single, duplex, multi-stage) and 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.

UNITED STATES
+1 (832) 948-5754
salesusa@controval.com

COLOMBIA
+57 (316) 4762766
ventascolombia@controval.com

VENEZUELA
+58 (424) 2180781 · Also on WhatsApp
ventasvenezuela@controval.com