FLOWSERVE

682-53B Dual Seal Barrier Fluid System

API 682 4th edition compliant Plan 53B

Experience In Motion

Standardized and assembled to order for reduced lead times

The 682-53B dual seal barrier system is Flowserve's most popular solution for mechanical seal barrier fluid systems. It's available as an assembled to order (ATO) product available from key global production locations with standardized components and pre-engineered configurations and packages. ATO products benefit you with faster quotation, reduced lead times and lower costs.

Designed to meet the rigorous demands of the API market as well as the chemical market and other general industries, the 682-53B product family is optimized for flexibility, reliability and value.

The durable design and materials of the 682-53B dual seal barrier system fully comply with API 682 (4th Edition) specifications. The 682-53B can also be built with U-stamped seal coolers, PED for the European Union and CRN for Canada.

Standardized on reliability and safety

Dual mechanical seals provide superior reliability, safety and emissions control for pumps, improving plant operations and reducing maintenance.

A Plan 53B is used with dual pressurized (API Arrangement 3) mechanical seals to provide clean and cool barrier fluid to the mechanical seal faces. Plan 53Bs use a bladder-type accumulator to prevent contact between the pressurization gas and the barrier fluid, allowing for higher pressures. In addition, the bladder accumulator eliminates the need for a gas pressurization source, which makes a Plan 53B ideal for remote services.

With many choices for capacity, instrumentation and construction, proper selection of a Plan 53B can be complex and lead to expensive solutions with long lead times. Flowserve's standard 682-53B pre-engineered packages provide a guide for competitive and fit-for-purpose options.

Key standardized features and options

- Two construction options — buttwelded piping with Class 600 flanges and gate valves, or tubing with compression fittings and ball valves
- 35-liter (10-gallon) bladder accumulator with carbon steel shell and off-shore duty paint, optional 316 stainless steel shell and/or low-temperature nitrile bladder
- Preferred fixed alarm strategy or floating alarm strategy
- Multiple pre-engineered seal coolers and instruments
- Stainless steel stand with multiple heights
- Sunshades included
- Pre-engineered accessories such as a hand pump, heated accumulator blanket and accumulator isolation with pressure indicator

Flowserve offers a broad range of seal cooler options to meet performance and cost goals

Wet seal coolers

- **682H:** High-performance, all-316 stainless steel construction
- **682M:** Balanced performance and cost with 316 tubing and painted carbon steel shell
- **682L:** Cost-competitive solution for light-duty services with 316 tubing and 304 stainless steel shell
- **NX0750** (when specified)**:** General industry design with 304 stainless steel tubing and painted carbon steel shell

Additional 682-53B options

- Hand pump for oil or water offers convenient built-in refilling
- Floating alarm strategy provides a refill alarm that varies with ambient temperature (ask your Flowserve representative why a fixed alarm strategy is recommended)
- Accumulator isolation from the seal cooler loop for easy maintenance
- Heated blanket with insulation cap stabilizes accumulator temperature, enabling lower refill pressures
- Additional instrumentation selections, including vendors and communication protocols

Natural convection seal coolers

- **ANC 12S:** High-performance solution with all-316 tubing and fins
- **ANC 12P:** High-performance solution for higher-viscosity fluids with a parallel path configuration with all-316 tubing and fins
- **ANC 6S:** Cost-competitive solution for light-duty services with all-316 tubing and fins

Forced convection seal coolers

- **AFC:** High-performance solution with 316 tube and fins and all corrosion-resistant shell materials

Custom Plan 53B units

Flowserve's standardized 682-53B seal system leverages our global supply resources and expertise to save considerable expenses and reduce lead times by 12 weeks or more. If our standardized components don't satisfy your preferences, Flowserve can still provide a fully customized Plan 53B to meet your exact specifications.

Pre-configured part code for easy quoting

Example:	Model	Accumulator	Certifications	Cooler Model	Connections	Trim Package	Options Package	Pump Height
53BC0AF06G0100L	**53B**	**C**	**0**	**A**	**F06**	**G01**	**00**	**L**
53BC0AF06G0100M	**53B**	**C**	**0**	**A**	**F06**	**G01**	**00**	**M**
53BC0AF06G0100H	**53B**	**C**	**0**	**A**	**F06**	**G01**	**00**	**H**
53BC0AT00G0100M	**53B**	**C**	**0**	**A**	**T00**	**G01**	**00**	**M**
53BC0BT00G0100M	**53B**	**C**	**0**	**B**	**T00**	**G01**	**00**	**M**
53BC0CT00G0100M	**53B**	**C**	**0**	**C**	**T00**	**G01**	**00**	**M**

Model:
53B

Accumulator:
C (Carbon Steel/Buna), S (316/Buna)

Certifications:
0 (Standard, U-Stamp on Accumulator), 1 (PED), 2 (U-Stamp on Seal Cooler and Accumulator), 3 (CRN)

Cooler Model:
A (682H), B (682L), C (682M), D (ANC 6S), E (ANC 125), F (ANC 12P), G (AFC), H (NX075)

Connections:
F06 (Cl 600 RFBW, T00 (Tubing)

Trim Package:
G00 (No Instruments), G01 (Global, E&H Hart), G02 (Global, E&H Foundation Fieldbus), G03 (Global, Rosemount™ Hart), G04 (Global, Rosemount Foundation Fieldbus), N01 (CSA Low-Temperature Trim, Including Low-Temperature Nitrile Bladder)

Options Package:
00 (No Options), 01 (Hand Pump), 02 (CSA Cl 1 Div 2 Heated Accumulator Blanket), 03 (Floating Alarm), 04 (Accumulator Isolation), 05 (Options 1 to 4), 06 (ATEX Zone 2 Heated Blanket)

Pump Centerline:
L (300 to 450 mm [11.8 to 17.7 in.]), M (451 to 600 mm [17.7 to 23.6 in.]), H (601 to 750 mm [23.6 to 29.5 in.])

Flowserve Corporation
5215 North O'Connor Blvd.
Suite 700
Irving, Texas 75039-5421 USA
Telephone: +1 937 890 5839

SSBR000516-00 (EN/AQ) June 2022