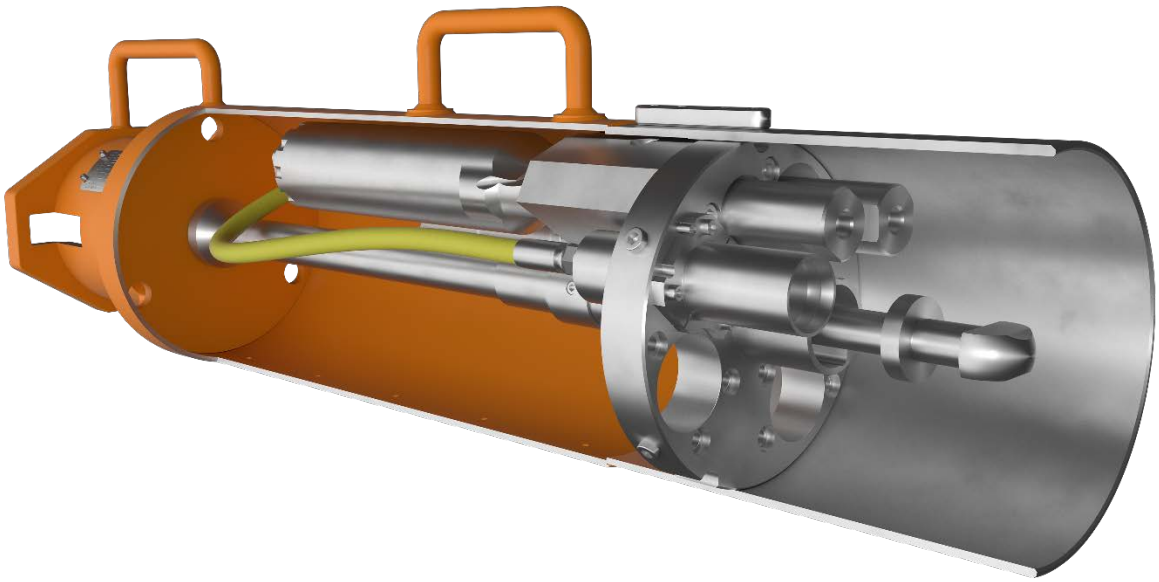

General Design Features

- SkoFlo Subsea Back Pressure Regulators (BPRs) are anti-siphoning devices that create back pressure in chemical injection lines to prevent uncontrolled delivery of chemicals into production wells caused by fluid siphoning.
- Subsea BPRs regulate inlet pressure when the well pressure falls below the factory set point of the device.
- The Subsea BPR is a self-regulating device activated only when required
- **Two Stage Device:** Cavitation is reduced or eliminated by separating the pressure drop across two stages.
- Utilizing two stages allows for larger fluid paths, resulting in a higher debris tolerance, longer device life, and lower design and operating pressures of topside chemical injection systems.
- Subsea BPRs can be installed on subsea trees, manifolds, logic caps, and Multi Quick Connect (MQC) plates.

SkoFlo Benefits

- 30-years of experience, industry expert and solutions provider
- Robust and reliable field proven designs that require minimal maintenance
- SkoFlo BPRs are designed to handle the FULL pressure drop throughout the entire rated flow range under continuous operation with minimal wear to internal components

GENERAL

Product	Back Pressure Regulator (BPR)			
Design Standards	API 17F (ISO 13628-6), API 17H (ISO 13628-8), ASME B31.3, ASME BPVC Section VIIII			
Design Life	25 years at 10% full scale with up to 5000psi pressure drop			
Temperature Rating Ops / Storage	39°F to 104°F (4°C to 40°C) / 0°F to 158°F (-18°C to 70°C)			
Pressure Rating Working / Proof	10,000 PSIG (689 barg) / 15,000 PSIG (1034 barg)			
Depth Rating	10,000 ft (3,048 m)			
Debris Tolerance	SAE AS4059 Class 12B-F			
Seawater Wetted Materials	- 316/316L Stainless Steel - Aluminum Bronze - Alloy/Inconel 625, 718, 725 - Alloy/Monel K500	- Gold (Plating over metal seals) - PVC NBR Blend (Proprietary) - Super Duplex 2507 - Nitronic 50 HS	- Nitronic 60 - EPDM - Elgiloy	
Chemically Wetted Materials	- 316/316L Stainless Steel - Alloy / Hastelloy C276 - Alloy/Inconel 625, 718, 725, X-750 - Gold (Plating over metal seals)	- Ceramic Coating (Proprietary) - Alloy/Monel K500 - Ceramic (Proprietary) - PEEK	- Carbide - Nitronic 50 HS - Chemraz 510 - PTFE	- Elgiloy

ELECTRICAL

Electrical Connector	4-Pin, Teledyne ODI or Simens Tronic
Electrical Connector Location	Electrical Connector located in the stab plate or ROV-deployed
Voltage Supply[1]	24±4 VDC
Power Consumption	2W ,Idle
Pressure Transducers	Sensor accuracy ± 0.05% of full scale (sensor full scale rating is 20,000 PSI)
Communications Protocol	CANbus (SIIS Rev 2 compliant for level 2 device) or Modbus

[1]*Information is for reference only, for the most updated information and additional details regarding valve power requirements, see the currently released revision of SkoFlo specification SPEC-10609. (per core, typical)*

PERFORMANCE

Flow Range	5 – 1200 GPD (0.79 – 189 L/H)
Pressure Set Point Accuracy	Target Set point pressure accuracy is ±400 PSI[2][3]
Failure Mode	Loss of pressure regulation will not block flow
Cv (well pressure > factory set point pressure)	~0.17 (At maximum flow rate with minimum pressure drop)

2 The Accuracy band includes changes in well pressure from 0 PSI to the set point pressure, full flow range of the device and thermal & hysteresis effects
3 Factory set point pressure can be set between 1,000 to 6,000 psi. When well pressure is above set point pressure, regulator is effectively a fixed orifice with Cv listed