

CAT Injection HPU

CAT Injection Triplex Pump:

- Compatible with methanol
- Consists of one triplex pump for fluid injection
- Certified for use in ATEX Zone 1
- Flow control valve for controlled injection flow rate
- Flowmeter for controlling flow rate
- Pressure indicator for monitoring pressure



Technical details - typical configuration

Dimensions	1280 (L) x 650 (W) x 1380 (H) mm
Weight	650 kg
Max. flow	134 l/min
Max. pressure	85 bar
Inlet connection	2" camlock
Outlet connection	1" NPT
Current consumption	125 A
Voltage range	400-690 V
Pump	CAT 3535
Motor	3-ATB BD1801-4 380-415 V, 50 Hz, 41.5 A, 22kW 660-720 V, 50 Hz, 24 A, 22 kW 380-415 V, 60 Hz, 40.7 A, 22 kW 660-690 V, 60 Hz, 23.5 A, 22 kW 440-480 V, 60 Hz, 41 A, 25.3 kW
Control panel	EExd/EExe
Nuflo flowmeter	1" flow 19-190 l/min, pressure 5000 psi

Double Chemical Injection Pump

LEWA unit built to ATEX and Norsok approved.

With two pump heads, separate suction and injection.

The pump can run two different chemicals and operate at different flow rates.

You can also calibrate by using a calibration glass or take a reading from the separate flowmeter.

It is also possible to connect the flowmeter to a data logger.

- Highest safety in operation
- Simple and safe start-up even under extreme conditions
- Even suitable for pumping from a vacuum
- Very long diaphragm service life
- Safe against high suction pressures upto 400 bar
- High metering accuracy and wide turndown range



Technical details - typical configuration

Dimensions	800 (D) x 1400 (W) x 1355 (H) mm
Weight	1100 kg
Lifting / Transport	Frame with posckets for forklift and lifting lugs according to Maskindirektivet 522
Required flow pump, LEWA LDE2 ecoflow	2x (4-40 l/h)
Operating pressure discharge	400 bar
Motor ABB Asea-Brown-Bov, Multivoltage (380-690 VAC)	3.0 kW
Flowmeter M1SSPH-R1	2x (2-88 l/h) total and flow rate
Voltage range	400-480 / 660-690 V
Frequency	50-60 Hz
Cable length	40 m
HP outlet	1/2" NPT M
LP inlet	1" NPT M

Frequency Controlled Chemical Injection Pump

ATEX approved.

- Frequency controlled (allowing for a better range)
- Integrated Emerson flowmeter
- Built-in accumulator
- Integrated double pressure sensor for failsafe operation
- All stainless steel
- 2.7.1. frame
- Digital touch screen for registration of max. pressure, flow and total volume
- Application: injection of liquids and chemicals (chemical injection)



Technical details - typical configuration

Dimensions	1400 (L) x 1000 (W) x 1700 (H) mm
Weight	1000 kg
Pump	LEWA
Pressure ranges	330 bar
Flow	0.2 - ca 60 l/h
HP filter	HC9020FKP4H
Inlet filter	Pall stav filter - 10 bar at 20 °C
Motor	5.5 kW
Voltage	400/690
Cable length	40 m
HP outlet / inlet	Parker 25 mm

Chemical Injection Systems (CIS)

Proserv specialises in various types of Chemical Injection Systems (CIS) for flow assurance, protection of equipment and achieved desired process parameters for production and well testing applications. We design, fabricate, manufacture, test, commission and install customised CIS and accessories to meet the highest standards of safety, performance and reliability in accordance with global regulatory standards and guidelines.

- In-house customised design to comply with challenging requirements
- Constructed from SS316/SS316L stainless steel w/drip pan, lifting points
- Portable options available on request
- User friendly operation of pumps with micrometer knob or with actuator for remote operation
- Equipped with pulsation dampeners, isolation valves and API 520 pressure relief valves to safeguard the complete operation
- Flow, level, pressure transmitters used to carry signals to control station to monitor complete operation from single remote point
- Tank design in line with ASME sec VIII Div 1 and using Roark & Young stress / strain formulae. Tank design to 'fire safe' norms - ASME U. R & PP stamping
- Nitrogen blanketing / floating roof design for hygroscopic



Technical details - typical configuration

Application	Controlled volume chemical dosing - continuous / intermittent
Dosing method	Single injection, multi point injection with IRCD, multi head pumps
Pumps	API 674/675 compliant, double diaphragm / reciprocating, pneumatically driven positive displacement
Tanks	Rectangular, cylindrical, vertical cylindrical, dished ends - ASME Sec VIII Div. 1, Roark and Young formulae
Instrumentation	Pressure, flow, level and temperature transmitters
Special instrumentation	Bubbler type LT & Air sparger
Tank volumes	P50-30,000 l (189-7926 gal US)
Discharge piping	Based on customised piping class using rated piping valves and qualified welding techniques / B31.3
Dosing capacity	0.1-700 l/hr (2.64-185 gal/hr US)
Pressures	1-690 bar (14.5-8,702 psi)
Special lifting equipments	Customised spreader bars
Skid design	Rectangular, modular

Grease Injection Skids

Proserv specialises in Grease Injection Skids (GIS) for Electric Line / Slick Line operations that are designed, manufactured, operated and maintained in accordance with all industry standards, laws and regulations. The design allows for the maintenance and service to be carried out in a safe and ergonomically acceptable way. It also allows for easy access to all main components in the skid without removing other main components for service and maintenance purpose.

The Grease Injection System consists of three air driven, separate and independent systems and supplies grease to the Grease Injection Head. The system is able to regulate any grease pressure between 0 and 828 bars independently to each Grease Injection Port. The control panel shall be supplied with X-over valves making it possible to use any pump to supply any outlet.



Technical details - typical configuration

Unit dimensions	2550 x 1960 x 2045 mm
Maximum gross weight	5000 kg
Installation zone	1
Hose reel length	35 m
Air supply pressure	8 bar
Low pressure alarm	Set point: 3.5 bar
Low level alarm	Set point for regulator: 1 bar
Noise level	Max 80 db

Grease system

Design pressure	805 bar
Operating pressure and flow	690 bar
Grease safety relief valve set point	760 bar
Grease tank capacity	1000 l
Set point for stand-by booster pump	2 bar
Visual indicator colour	Green (main pump running), Red (stand-by pump running)

Grease Injection Skids

The hydraulic system supply hydraulic pressure to toolcatcher, stuffing box, Linewiper and grease return valve. Stainless steel handpump as backup.

GIS is supplied with rig air. Air system is equipped with self-draining water separators.

Technical details - typical configuration

Hydraulics

Design Pressure	345 bar
Operating pressure and flow	210 bar
Hydraulic safety relief valve set point	228 bar
Hydraulic tank capacity	30 l

Air system

Design pressure	10 bar
Operating pressure	8 bar
Air reservoir	20 l