

# Well Flow Management

## Well Testing | TMU

### Arctic Trailer Mounted Unit

The Arctic TMU is a custom designed, self-contained system which is used to perform well testing and clean-up operations in the Alaskan Arctic or similar locations globally, comprising of;

**High Pressure System** – Fluid inlet, Surface Safety Valve (SSV), Choke manifold with integral Emergency Shutdown System (ESD)

**Horizontal Separator** – A four phase, 1440 psi vessel, 42" ID x 15 feet, designed to separate oil, gas, water and solids from the well stream.

**Data Acquisition System** - Process equipment interfaces with Expro's Edge-X, next generation PC based data management system, recording quantities and flow rates of produced oil, water and gas in real time.

**Safety Systems** - The ESD system has pneumatically operated pressure and liquid level high and low pilots linked to the SSV. A separate SSV or flow wing valve can also be installed near the wellhead to tie into the safety system.

**Chemical injection / Pressure test system** – Dual, 10,000 psi pumps are in place to inject chemicals and an electric pressure test pump is provided to test the unit for routine maintenance and test pipe recently rigged up. The pump also allows for post job winterizing of process lines with methanol.

**On-board utilities** – An integral 85 KW, diesel-powered generator is installed, with an eight bbl. diesel tank. A 40 CFM air compressor is also installed for separator instrumentation, chemical.

**Sampling** – Field fluid analysis, including basic sediment and water content, water weight, water salinity, water Ph, oil gravity and oil shrinkage. Gas gravity, CO<sub>2</sub> and H<sub>2</sub>S is also measured may be provided. Pressurized and atmospheric fluid samples can be taken upon customer request.

**Laboratory** - The on-board, pressurized laboratory is primarily for data acquisition, analysing and reporting, serving as an office and the focal point for all related communications.

#### Applications

- Onshore well testing
- Arctic / low temperature environments

#### Features and benefits

- Reduce rig-up and rig-down time
- Specifically designed for low temperature environments
- Meets industry design standards
- Integral Piping pre-installed
- Separate pipework / ancillary equipment trailer



**Pipework trailer** - Included as part of the Arctic trailer package and used to transport all pipework, fittings and crossovers necessary to complete a standard rig up. Flowline equipment is stored on racks complete with forklift pockets / lifting eyes and can be removed from the trailer and spotted separately. The pipework included allows the separator trailer to be located up to 150 ft from the wellhead and maintain a 10,000 psi pressure rating. Up to 500 ft of low pressure, piping is installed downstream of the separator and configured as per the project specifications.

The Pipework trailer is used to transport the additional standalone Surface Safety Valve, which is installed near the wellhead and operated from the separator trailer ESD.



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Technical specifications								
Component	Code	Dims (in x ft)	MAWP (psi)	Connections	Length	Width	Height	Weight (lbs)
Choke	NACE MR0175, API 6A, PSL3	3-1/16"	10,000	Inlet-3" Fig 1502				
Separator	ASME VIII Div 1	42" x 15"	1,440	Drain-2" Fig 1502 Gas - 3" Fig 602 Oil - 3" Fig 602 Water - 3" Fig 602 Relief - 4" Fig 602	56'6"	11'2"	13'6"	90,000

  

Design flow rates (for guidance only)				
Range	Gas	Oil	Water	
Low rate	10,000 scf/d	515 bbls/d	515bbls/d	
High rate	45 MMscf/d	15,000 bbls/d	6,000 bbls/d	

Note: Project tailored systems can be supplied based on client requirements, for more information contact your local Expro representative or email [welltesting@expro.com](mailto:welltesting@expro.com)