

1000K LIQUID NITROGEN PUMP TRUCK

The liquid nitrogen pump equipment is a special equipment which converts low pressure liquid nitrogen into high pressure nitrogen. The 1000K liquid nitrogen pump truck produces a lot of heat by directly burning diesel oil to gasify liquid nitrogen to meet customers' demand for nitrogen with different discharge and different temperature.

Product advantage

- Uniform self-made high-pressure pipe lines and concise operation area;
- SANY oil field special chassis, with strong off-road performance and high cost performance;
- Full hydraulic drive, using continuously variable transmission control instead of limited gear control;
- Integrative intelligent control system to achieve intelligent reminder of one key startup and maintenance;
- The multi-power source replaces the single power source. Use of common engine and hydraulic elements in the market and removal of gearbox significantly reduce the maintenance threshold, save the maintenance cost and shorten the maintenance cycle.

Process

Liquid nitrogen container → Centrifugal booster pump → Five-cylinder plunger pump → Direct-fired evaporator → Construction user



Main Performance Parameters

Items	Configuration 1 parameter
Maximum operating pressure MPa (psi)	105(15000)
Maximum liquid nitrogen output flow rate L/min (GPM)	492(130)
Maximum gas nitrogen output flow, m ³ /h (SCFH)	20500(720000)
Truck outside dimension (L×W×H) (mm)	11930×2550×4000
Total equipment weight (t)	33
Engine power hp (kw)	600×2(447×2)@1800-2100
High pressure manifold system MPa (psi)	105 (10000)

Main Configuration

No	Main components	Standard configuration
1	Chassis truck	SANY 8*6
2	Engine	CUMMINS
3	Transfer box	Resta
4	Five-cylinder plunger pump	ACD
5	Direct-fired evaporator	CRYOQUIP
6	Centrifugal booster pump	ACD
7	Liquid nitrogen container	4m ³ /0.6MPa
8	Control system	SANY
9	Control room	SANY
10	High/low pressure manifolds	-
11	Heater	-
12	Air conditioner	-20-+45°C

Pressure Displacement Table

Stroke number of big pump	2" cold end		2.52" plunger	
	Low L/min	Pressure /MPa	Low L/min	Pressure /MPa
100	49.2	105	78.1	80
200	98.5	105	156.3	80
300	147.7	105	234.4	80
400	196.9	105	312.5	80
500	246.1	105	390.7	80
600	295.4	105	468.8	67
700	344.6	90	547	57
800	393.8	80	625.1	50
900	443.1	70	703.2	45
1000	492.24	64	781.48	40

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