

2500 mechanical fracturing truck

Product advantages

- Use the special truck chassis self-made by the SANY, having 8*6 drive and good off-road performance;
- The equipped two-stage reduction axle greatly increases the chassis passing performance;
- Automatic prompting system for intelligent online detection, remote monitoring and maintenance;
- Integrated pump independently developed by the SANY has better lubrication effect and high pump body strength;
- Consumable parts have wearing and corrosion-resistant design under special process treatment to ensure the continuous working time.



Complete equipment parameters

Items	Parameters
Maximum working pressure at fluid end MPa (psi)	4"-105(15000)
Maximum output flow at fluid end L/min (GPM)	4"-1520(401.5)
Maximum output hydraulic power at fluid end vKW/HP	1860(2500)
Truck outside dimension (L×W×H) mm	11750×2540×4000
Total equipment weight kg	43450
Power of deck engine KW(HP)	2237(3000)/1900rpm
High pressure manifold system	105MPa

Fracturing truck power displacement form

Gear Levels	Displacement L/min				Pressure MPa			
	3.75"plunger	4"plunger	4.5"plunger	5"plunger	3.75"plunger	4"plunger	4.5"plunger	5"plunger
Level 1	478	544	689	850	105	105	99	80
Level 2	652	741	938	1159	105	105	99	80
Level 3	726	826	1045	1290	105	105	99	80
Level 4	884	1006	1273	1572	105	105	87	71
Level 5	989	1125	1424	1758	105	99	78	63
Level 6	1342	1527	1933	2386	83	73	58	47



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2500 hydraulic fracturing truck

Product advantages

- The displacement control of hydraulic transmission is more precise, the displacement is continuous and adjustable, the continuously variable transmission has no impact, and the flexible transmission is more stable;
- According to different operating conditions, flexibly open the appropriate number of engines to realize the multiple purposes of one machine;
- Purchasing cycle of engine, chassis and other parts is short, and shorten manufacturing cycle can realize the faster delivery to customers;
- Realization of heat source management and key maximum temperature of the whole machine not exceeding 350°C can greatly improve the safety of the whole truck. The oil cylinder type segmented hydraulic steel pipes are used to reduce the weld seams and to improve the safety performance by a level;
- Adoption of common engine and hydraulic elements in the market and removal of gearbox can significantly reduce the maintenance threshold, save maintenance cost and shorten the maintenance cycle;
- Multiple engines backup each other. When one engine fails, others may provide compensation by increasing the output power, which can ensure the continuous construction without interruption;
- Minimum clearance from ground is 360 mm, the turning diameter is 28 meters, and the engine has brake in cylinder to enhance the passing performance;
- Good plateau performance, and no power reduction at 3000m.



Main functional characteristics of product

- ① . Coiled tubing drilling plug for fluid supply, with displacement of 0.2-0.4 m³/min and pressure of about 70-100 Mpa;
- ② . Chemical squeeze injection into self-blowout well for pipe clearance, with displacement ≤ 0.2m³/min and pressure of about 100Mpa;
- ③ . Shale gas fracturing, with displacement of 0.8-1m³/min and pressure of about 70-90Mpa, for long continuous operation;
- ④ . Coalbed methane fracturing, with displacement of 1.5-1.8m³/min and pressure of 20-50Mpa;
- ⑤ . Oil field increase production operation, with displacement of 0.8-1m³/min and pressure of 50-70Mpa.

Main product parameters

Product type	2500-type
Maximum operating pressure (MPa)	124-4"
Maximum output flow (L/min)	2471-4"
Maximum water output power (kw/hp)	1860 \ 2500
Overall dimensions (L × W × H) (mm)	12330×2500×3850
Total weight of equipment (t)	44
Superstructure engine power hp (kw)	4×768-4×565 @1900
High-pressure manifold system (MPa)	105 Mpa

Pressure Displacement Table

Stroke number	Displacement L.min-1				Pressure MPa			
	3.75" plunger	4" plunger	4.5" plunger	5" plunger	3.75" plunger	4" plunger	4.5" plunger	5" plunger
3	22	25	31	39	140	124	96	78
67	486	553	700	864	140	124	96	78
84	608	692	876	1082	140	124	96	78
105	762	867	1097	1355	140	124	96	78
124	901	1025	1298	1602	124	109	86	70
156	1131	1287	1629	2011	99	87	69	56
195	1410	1605	2031	2507	79	70	55	45
240	1738	1977	2502	3089	64	57	45	36
300	2172	2471	3457	3861	51	45	32	29

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Multifunctional oilfield special vehicle

Product advantages

- Hydraulic continuously variable transmission, with displacement continuous and adjustable, and the minimum stable displacement is less than 100L / min
- 1800 five-cylinder plunger pump, with stable displacement output;
- Three sets of water tanks are provided for single vehicle independent pressure test;
- Centrifugal pump for water supply is provided to realize independent construction;
- The service life of the S.S. pump head body and manifold system is longer;
- Three-bridge chassis, with turning radius of 22m, has better passing performance;
- All-round arrangement of LED working lights to facilitate night construction.



Main functional characteristics of product

- ① . Coiled tubing drilling plug for fluid supply, with displacement of 0.2-0.4 m³/min and pressure of about 50-70 Mpa;
- ② . Chemical squeeze injection into self-blowout well for pipe clearance, with displacement ≤ 0.2m³/min and pressure of about 100Mpa;
- ③ . Water injection process, with displacement of 0.5-0.8m³/min and pressure of about 40-50Mpa, for 72H continuous operation;
- ④ . Pressure test process, with displacement of 0.1-0.2m³/min and pressure of 70-105Mpa;
- ⑤ . Small-scale acid fracturing, with displacement of 0.5m³/min and pressure of 80Mpa.

Main product parameters

Product type	1500-type
Maximum operating pressure (MPa)	3.75"-105(15000)
Maximum output flow (L/min)	3.75"-1631(494)
Maximum water output power (kw)	1000
Truck outside dimension (L×W×H) (mm)	≤ 9800×2550×4000
Total equipment weight (t)	≤ 33450
Power of deck engine hp (kw)	2×758(2×565)
Chassis engine power KW(HP)	316(430)@1900 rpm
High pressure manifold system	105 Mpa

Таблица давления и расхода

Stroke number	Displacement L.min-1			Pressure MPa		
	3.75"plunger	4"plunger	4.5"plunger	3.75"plunger	4"plunger	4.5"plunger
10	72	82	105	103	96	76
15	108	123	157	103	96	76
30	217	247	314	103	96	76
50	362	412	523	103	96	76
80	578	658	836	93	82	65
110	795	905	1150	68	60	47
140	1012	1152	1463	50	44	35
170	1229	1399	1777	41	36	29
200	1446	1646	2090	33	29	23
226	1631	1860	2362	28	25	19

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100-BARREL FRACTURING BLENDER TRUCK

Product advantage

- Power is from engines on both chassis and platform and is sufficient;
- High precision guided wave radar level gauge, and stable liquid level of mixing tank with reliable control;
- Intake and outlet use the imported centrifugal pump, high-precision imported electromagnetic flowmeter, high-precision liquid-adding mass flowmeter and selected environment-friendly density meter which make data reliable;
- Double-screen construction operation system ensures the humanization and intellectualization of the operation process and the real-time automatic drawing of construction curve;
- The operating system is easy to operate, and can realize the functions of real-time monitoring, manual-automatic switching control and parameters setting and calibration of the blender truck;
- Low-pressure manifold material, densitometer, union joint can be selected and customized according to customer's needs.

Sufficient
Power

Stable Liquid
Level

Reliable
Data

Intelligent
Control

Simple
Operation



Main performance indexes of blender truck with capacity of 100 barrels

Parameters	Values
Rated clear water displacement	16(100) m ³ /min(bbl)
Maximum discharge pressure	0.5Mpa
Maximum sand transportation volume	360 m ³ /h(11500kg/min)
Displacement of liquid adding system	15, 68, 63, 136/L/min
Displacement of dry adding system	10-50L/min
Mixed tank volume	1.5 m ³
Installed power	763(447+316)KW
Truck outside dimension (L×W×H)	13570×2540×3950mm
Turning diameter	29m
Total equipment weight	32000kg

Main configuration of blender truck with capacity of 100 barrels

Names of Elements	Standard configuration	Remarks
Truck chassis	SANY SYM5550T1E	-
Superstructure engine	CUMMINS QSX15 600HP	-
Suction centrifugal pump	12"×12"×14 7/8 "	Imported
Discharge centrifugal pump	12"×10"×23"	Imported
Flowmeter	8" electromagnetic flowmeter	-
Densimeter	Environmental-friendly radio densitometer	Provided for selection
Liquid adding system	CAT311, CAT1541, SPX18, SPX30	-
Dry adding system	BSL-P1-10L, BSL-P1-50L	-
Union on left side	6 1/8"-3ACME-2G	Optional coarse thread
Union on right side	6 1/8"-3ACME-2G	Optional coarse thread
Low pressure manifold	Carbon steel/stainless steel	Provided for selection

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130-BARREL FRACTURING BLENDER TRUCK

Product advantages

- Power is from engines on both chassis and platform and is sufficient;
- High precision guided wave radar level gauge, and stable liquid level of mixing tank with reliable control;
- Intake and outlet use the imported centrifugal pump, high-precision imported electromagnetic flowmeter, high-precision liquid-adding mass flowmeter and selected environment-friendly density meter which make data reliable;
- Double-screen construction operation system ensures the humanization and intellectualization of the operation process and the real-time automatic drawing of construction curve;
- The operating system is easy to operate, and can realize the functions of real-time monitoring, manual-automatic switching control and parameters setting and calibration of the blender truck;
- Low-pressure manifold material, densitometer, union joint can be selected and customized according to customer's needs.

Sufficient
Power

Stable Liquid
Level

Reliable
Data

Intelligent
Control

Simple
Operation



Main performance indexes of blender truck with capacity of 130 barrels

Parameters	Values
Rated clear water displacement	20(130) m³/min(bbl)
Maximum discharge pressure	0.5Mpa
Maximum sand transportation volume	360 m³/h(11500kg/min)
Displacement of liquid adding system	15, 68, 63, 136/L/min
Displacement of dry adding system	10, 50L/min
Mixed tank volume	1.5 m³
Installed power	881(565+316)KW
Truck outside dimension (L×W×H)	12850×2550×3950 mm
Turning diameter	29m
Total equipment weight	33000kg

Main configuration of blender truck with capacity of 130 barrels

Names of Elements	Standard configuration	Remarks
Truck chassis	SANY SYM5550T1E	-
Superstructure engine	TAD1643VE-B 565kW Tier3 Volvo PTO	-
Suction centrifugal pump	12"×12"×14 7/8 "	Imported
Discharge centrifugal pump	14"×12"×22"	Imported
Flowmeter	10" electromagnetic flowmeter	-
Densimeter	Environmental-friendly radio densitometer	Provided for selection
Liquid adding system	CAT311, CAT1541, SPX18, SPX30	-
Dry adding system	BSL-P1-10L, BSL-P1-50L	-
Union on left side	6 1/8"-3ACME-2G	Optional coarse thread
Union on right side	6 1/8"-3ACME-2G	Optional coarse thread
Low pressure manifold	Carbon steel/stainless steel	Provided for selection

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4×4 Intelligent Data Van

Product advantages

■ **Strong power and better passing performance**

Being powered by a 310 horsepower high-power engine makes the power stronger; Beiben 4×4 State VI Off-road chassis, with better passing performance.

■ **Construction and full equipment management**

The expert system provides the best construction method by comparing, analyzing and managing the actual construction method with the theoretical construction method;

The front-end fluid and sand feeding equipment for fracturing construction is integrated into the equipment management system of data van such as the mixing equipment, centralized control of manifold and etc.

■ **Digital twin technology**

The construction site data is projected into the data van. Real-time monitoring can be carried out in the data van with hand-held device based on large data analysis and wireless technology.

■ **Expert diagnosis system for automatic fault diagnosis**

Combining the monitoring system of data van, monitoring system of blender truck and expert system grants the field equipment the ability of fault self-diagnosis.

■ **Safety warning and voice prompt**

Safety warning and voice prompt are given for dangerous factors such as high temperature, abnormal vibration, manifold leakage and personnel entry into high pressure area by using image recognition and dynamic capture technology.





Product performance parameters

Product type	Values
L × W × H (mm)	9345×2550×3920
Engine (Weichai)	WP9H310E62
Generator	16 kVA, placed at side.
UPS□kVA□	3
Data acquisition system (SANY)	2 Sets
Pump vehicle control system (SANY)	2 sets for control of 24 fracturing trucks
Blender monitoring system (SANY)	One set for control of 2 sets of blender trucks
Camera monitoring and diagnosis system	One set for control of 16 lines

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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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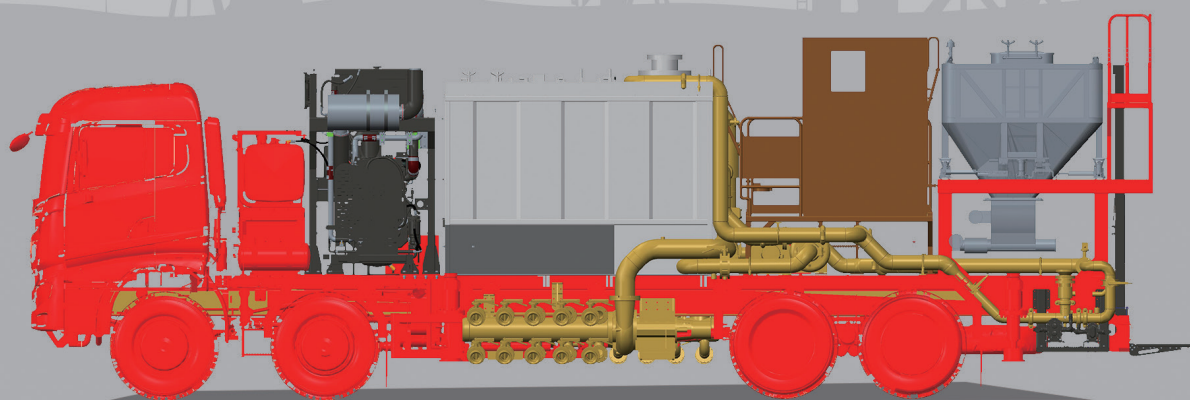
Blender truck with capacity of 12m³

Main functional advantages

- Imported centrifugal pump with large displacement, and high efficient blender to ensure output of high quality mixed liquid;
- High-precision imported powder metering electronic scale, high-precision imported electromagnetic flowmeter and high-precision liquid-adding mass flowmeter ensure the concentration of mixed liquid and liquid-adding ratio;
- High precision imported liquid level meter ensures the stability and reliability of the liquid level control system;
- Double-screen construction operating system ensures humanization and intelligence of the operation process;
- Automatic limiting mechanism of powder storage tank ensures the stability and reliability of the truck running process;
- Sufficient power ensures that the startup of screw conveyor of powder belt has no blocking;
- Chassis has excellent off-road performance and strong bearing capacity.

Main functional advantages

- Forklift truck gantry continuous loading system with high reliability & stability;
- Large comfortable operating room with thermal insulation and noise reduction;
- New fast wire harness for maintenance, with better compatibility and extension function;
- Remaining liquid drainage system for tank and manifold;
- Butterfly valve status monitoring to realize the high efficient abnormal fault detection;
- Specific human-machine designs such as anti-skidding design on tank roof and fast guardrail.



Технологический прорыв

- ① . Optimization of mixing process of powder and water, and development of high efficient special mixer structure;
- ② . Development of intelligent control system;
- ③ . Development of automation machinery structure;
- ④ . High performance conveyor and power development;
- ⑤ . Improvement of performance combining user's experience and maintenance convenience details.

Main performance indexes

Performance indexes	Parameters
Maximum output flow (m ³ /min)	12
Maximum discharge pressure (MPa)	0.25
Liquid mixing concentration (powder -water mass ratio)	0.1%~0.6%
Truck outside dimension (L×W×H) (mm)	12500*2550*4000
Total equipment weight (t)	33

Main Configuration

Main Configuration	Parameters
Installed power (hp)	≥ 500hp
Chassis system	SANY 8*6 off-road chassis
Suction centrifugal pump	Mission 10*8*14
Discharge centrifugal pump	Mission 10*8*14
Mixing system	Special high performance mixer, 12m ³ of mixing tank
Dry powder adding system	3m ³ of tank, and double screw conveyor
Liquid adding system	Four sets in total, respectively are 30, 60, 130 and 160L/min
Control system	Double screen + automatic butterfly valve control system

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