



## **Our Company**

Mathena Inc. was established in 1990 with an oilfield background. Our headquarters is in El Reno, Oklahoma with numerous field offices throughout Oklahoma, Texas, Arkansas, Pennsylvania, West Virginia, North Dakota and Wyoming. We provide exceptional surface control equipment with a high level of service and deep subject matter expertise. We're constantly appreciating the company's most critical resource – our employees and strong fiscal responsibility through the company's expansion.



## **Our Mission + Values**

Our mission is to provide surface control solutions – supported by superior equipment and exceptional service – that enable greater efficiencies for our customers and maximizes safety for our employees.

We do this by adhering to three simple values:

**Integrity:** *Our behaviors and actions convey the utmost integrity in all our business dealings.*

**Quality:** *Our superior equipment, exceptional service and safety focus are of the highest quality.*

**Commitment:** *Our promise of safety, reliability and service to our business partners, employees and community.*

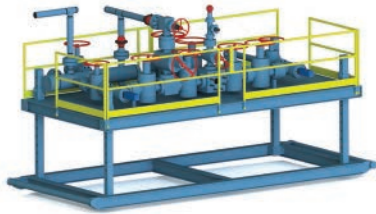


**Call our 24-hour response service at 800-442-1307 or visit [www.mathena-inc.com](http://www.mathena-inc.com)**

[back to shaker screens homepage](#)

## Our Solutions

We provide a complete line of surface control solutions.



Choke Manifold



Hydraulic Drilling Choke



Mud-Gas Separator



Vent Line Drive-Over



Shale-Gas Separator



Atmospheric Degasser



Premix Tank



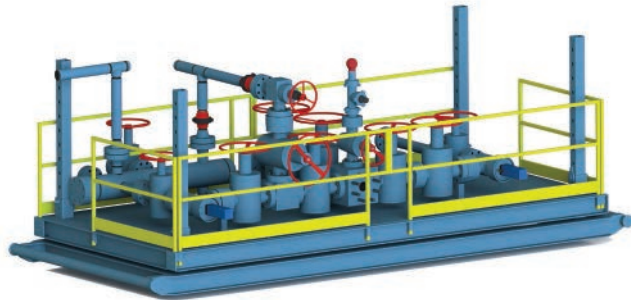
Gas Vent Line Igniter



Ecological Containment System



# Choke Manifold



The **Mathena Choke Manifold** is a central component for basic well control. The manifold safely controls well flow using several gate valves and block configurations based on customer specifications. Additionally, the manifold platform is easily adjustable to the proper height, based on each specific application.

## Performance Features:

- Heavy-duty steel construction and adjustable mounting skid for any rig
- Simple seven-valve base design, allowing easy isolation and replacement
- Optional choke house for cold climates
- Flexible configuration
- Meticulous construction by our expert staff

Choke Manifold - 5,000 psi	
Skid Dimensions (L x W x H):	16' x 8' x 7'
Weight:	9,980 lbs
Scope-ability (inlet/outlet):	1'9" to 7'6"
Base Configuration:	Seven Gate Valve Design
<ul style="list-style-type: none"> <li>• Valves - (2) 4 1/16" - (4) 3 1/16" - (1) 2 1/16"</li> <li>• Block - (1) 4 1/16" x 4 1/16" x 3 1/16" x 3 1/16" x 2 1/16"</li> <li>• Gauge - 10,000 psi</li> </ul>	

Choke Manifold - 10,000 psi	
Skid Dimensions (L x W x H):	16' x 8' x 7'
Weight:	11,800 lbs
Scope-ability (inlet/outlet):	1'9" to 7'6"
Base Configuration:	Seven Gate Valve Design
<ul style="list-style-type: none"> <li>• Valves - (2) 4 1/16" - (4) 3 1/16" - (1) 2 1/16"</li> <li>• Block - (1) 4 1/16" x 4 1/16" x 3 1/16" x 3 1/16" x 2 1/16"</li> <li>• Gauge - 10,000 psi</li> </ul>	
Choke Manifold - 15,000 psi	
Skid Dimensions (L x W x H):	17' x 8' x 7'
Weight:	15,500 lbs
Scope-ability (inlet/outlet):	1'9" to 7'6"
Base Configuration:	Seven Gate Valve Design
<ul style="list-style-type: none"> <li>• Valves - (2) 4 1/16" - (4) 3 1/16" - (1) 2 1/16"</li> <li>• Block - (1) 4 1/16" x 4 1/16" x 3 1/16" x 3 1/16" x 2 1/16"</li> <li>• Gauge - 15,000 psi</li> </ul>	
Expandable Features:	
<ul style="list-style-type: none"> <li>• Blocks</li> <li>• Valves</li> <li>• Hydraulic or Manual</li> <li>• Choke Dog House</li> <li>• Panic Line</li> </ul>	





# Hydraulic Choke



The **Mathena Hydraulic Choke** uses an advanced plug and seat design for positive metal-to-metal closure, even after extended use. All major wear parts are made of heavy-duty tungsten carbide for greater trim life. Our rugged control console uses high-pressure stainless steel tubing, ensuring safe operation and precise, remote control of the chokes.

## Performance Features:

- Piston-driven actuator ensures consistent performance under high pressure
- Pressure balanced choke plug ensures smooth operating and locking
- Provides 2-inch maximum orifice
- Withstands operating temperatures of -50°F to +350°F
- Digital gauges
- Quick and easy inspection and replacement of trim, even while choke is in-line
- Better wear resistance with satellite nose overlay

Hydraulic Choke Panel	
Dimensions (L x W x H):	2' x 3' x 4'
Weight:	500 lbs
Configuration Options:	Single Remote Panel
	Dual Remote Panel
	10,000 psi gauges
	15,000 psi gauges
Operational Power:	Hydraulic or Manual
Features:	
Drill Pipe & Casing Pressure Gauges, (2) Transducer Pressure Sensors, Air & Hydraulic Pressure Gauges, Choke Position Indicator Gauge(s), Stroke Counter (2) Limit Switch Stroke Counters (Total Strokes/Stroke Per Minute)	

Hydraulic Choke – 10,000 psi	
Dimensions (L x W x H):	3'1" x 1'4" x 1'
Weight:	300 lbs
Configuration:	3 1/16" 10,000 psi
Internal Design:	
Plug, Seat, Downstream Wear Sleeve	Tungsten Carbide
Hydraulic Choke – 15,000 psi	
Dimensions (L x W x H):	3'1" x 1'4" x 1'
Weight:	330 lbs
Configuration:	3 1/16" 15,000 psi
Internal Design:	
Plug, Seat, Downstream Wear Sleeve	Tungsten Carbide





# Mud-Gas Separator



The **Mathena High-Volume Mud-Gas Separator** provides effective surface control of the drilling fluid and gas circulated from a well, venting the “free” gas at a safe distance from the rig to the gas vent line igniter, while returning the drilling fluid to the active system in a controlled flow.

## Performance Features:

- Maximizes free gas/mud separation
- Unique U-shaped tube design eliminates moving parts and ensures a positive fluid seal, maintaining safe mud levels
- Safely handles trip gas in under-balance drilling applications
- Efficient baffle arrangement to easily separate gas from fluid
- Two vertical surge chamber pressure lines allow expansion and diffuse downstream pressure
- Available in varying sizes and lengths, accommodating any volume of fluid with high concentrations of gas
- Heavy-duty steel construction and adjustable mounting skid for any rig

Separator Size 6' x 23' (1.8 m x 7.0 m)	
Skid Dimensions (L x W x H):	32' x 8' x 8'8"
Weight:	22,000 lbs
Scope-ability (return line):	11' to 16'
Vessel Capacity (U.S. Gallons):	4,875 gal (102 bbl)
Recommended Well Depth (feet)*	0-15,000+
Recommended Gas Separating Rating	0-1,000 gpm

Separator Size 6' x 15' (1.8 m x 4.6 m)	
Skid Dimensions (L x W x H):	24' x 8' x 8'8"
Weight:	16,500 lbs
Scope-ability (return line):	11' to 16'
Vessel Capacity (U.S. Gallons):	3,179 gal (66 bbl)
Recommended Well Depth (feet)*	0-14,999
Recommended Gas Separating Rating	0-600 gpm
Separator Size 5' x 14' (1.5 m x 4.3 m)	
Skid Dimensions (L x W x H):	24' x 8' x 8'8"
Weight:	12,500 lbs
Scope-ability (return line):	11' to 16'
Vessel Capacity (U.S. Gallons):	1,904 gal (45 bbl)
Recommended Well Depth (feet)*	0-12,000
Recommended Gas Separating Rating	0-500 gpm
Separator Size 4' x 12' (1.2 m x 3.7 m)	
Skid Dimensions (L x W x H):	20' x 8' x 8'8"
Weight:	10,000 lbs
Scope-ability (return line):	10' to 15'
Vessel Capacity (U.S. Gallons):	1,041 gal (25 bbl)
Recommended Well Depth (feet)*	0-10,000
Recommended Gas Separating Rating	0-400 gpm

GPM Ratings are based on a U.S. gallon of fresh water at 8.33 lbs.  
\*Separator size based on several factors, including well depth, mud weight, volume of mud, flow of mud, under balanced drilling, formation history, etc.





## Vent Line Drive-Over



**Mathena's Vent Line Drive-Overs** are an oilfield first. They allow 360-degree access around the entire drilling location. The Drive-Over design eliminates the need to bury or berm over various lines, which reduces costs and ensures the integrity of the pipe, hose and electrical lines on site. Our low-profile design allows large vehicles and light duty trucks to cross easily. The Drive-Over features a durable design that has been field tested by the heaviest industrial equipment. This piece of equipment could be used for completion, production and work-over applications, as well.

### Performance Features:

- The Mathena Vent Line Drive-Overs protect vent lines and other pipes from heavy vehicles at the rig site
- Eliminates need to dig trenches for pipe or unhooking line to create a driveable lane

Vent Line Drive-Over	
Diameter:	8"
Length:	20'
Width:	4'
Weight:	3,200 lbs





# Shale-Gas Separator



The **Mathena Shale-Gas Separator (SGS)** international patent pending design separates shale cuttings from gas during air drilling operations. Dust from air drilling is suppressed by water flow through the Dust Eliminator system, which is affixed on the flow line upstream of the Shale Gas Separator (SGS). As air, shale cuttings and gas enter the unit, the gas is directed to the top of the vessel through the vent line to the igniter, while heavier materials – including water and cuttings – are discharged through the bottom of the unit to a haul-off pit or container. Mathena has developed this unit to eliminate dust, properly vent gas and discharge shale safely during air drilling operations.

[back to shaker screens homepage](#)

### Performance Features:

- The Mathena Dust Eliminator is affixed upstream on the flow line prior to entry into the SGS mitigating dust created by air drilling
- Field tested to handle 2,000-6,000 cfm of air volume
- A removable internal wear plate is positioned near the SGS tangential spin inlet to provide longer lasting wear
- Includes an 8-inch Jet Hopper System that discharges solids and water to a haul-off pit
- Features an internal u-tube with an external 6-inch butterfly valve for fluid bypass when water is encountered while drilling
- Equipped with float indicator, horn and flashing light warning system to notify personnel of fluid levels
- Requires a minimum 150 psi of constant air volume at 900 cfm and a minimum of 5 gpm water supply for dust elimination

Shale-Gas Separator Size 6' x 15'	
Skid Dimensions (L x W x H):	20'6" x 8' x 8'
Weight:	12,500 lbs
Components:	
• Vessel Dimensions	6' Diameter x 15'
• Dust Eliminator	10" x 2' spool w/ baffles and 2" collar
• Jet Hopper System	8" hopper with a 2" to 3/4" air jet nozzle
• Shale-Gas Muffler	10" x 26" with hood
• Vibratone Horn and Blue Light	Light flashes with alarm alerting for fluid bypass
Flow-Line Inlet:	(1) - 10"
Compressed Air Inlet:	(1) - 2"
Dust Eliminator Water Inlet:	(1) - 2"
Shale Discharge Outlet:	(1) - 6"
Gas Vent Line Outlet:	(1) - 8" or 10"

*\*Ratings are based on a U.S. gallon of fresh water at 8.33 lbs.*







# Atmospheric Degasser



The **Mathena-modified Atmospheric Degasser** uses the impact-plus-turbulence principle, creating a high-velocity drilling fluid spray sheet that facilitates gas extraction. At start-up, drilling fluid enters the submerged impeller and travels up to the elevated spray tank. A circular disc “splash plate” turns the fluid into a high-velocity sheet that strikes the wall of the bowl with sufficient force to separate the gas from the fluid. The degassed fluid then flows downstream through the discharge pipe.

### Performance Features:

- Compact, lighter weight solution to fit almost any pit area
- Maximum water flow of 700 gallons per minute
- Accepts any fluid weight or mud viscosity
- One-eighth the cost of conventional vacuum degassers using centrifugal pumps
- Simple switch operation for rapid startup or shutdown
- No cleaning – drilling fluid flow removes sand and cuttings
- Uses unique Mathena rugged bowl and custom impeller for extended life

Atmospheric Degasser – Long Shaft	
Dimensions (L x W x H):	6'4" x 3'7" x 10'3"
Weight:	1,000 lbs
Electric Motor:	10hp
Voltage	3 Phase 240/480 V
GPM Rating*	700 gpm
Atmospheric Degasser – Short Shaft	
Dimensions (L x W x H):	6'4" x 3'7" x 7'11"
Weight:	1,000 lbs
Electric Motor:	10hp
Voltage	3 Phase 240/480 V
GPM Rating*	700 gpm
Additional Features:	
<ul style="list-style-type: none"> <li>• Custom Impeller</li> <li>• Rugged Bowl</li> </ul>	

\*Ratings are based on a U.S. gallon of fresh water at 8.33 lbs.





# Premix Tank



The **Mathena Premix Tank** uses an advanced dual-hopper system, designed to quickly give you a consistent mixture every time. A Golden Throat Hopper speed-mixes LCM, fragile crystals and coarse granular materials without degradation, while a Lobestar Shear/Mixer rapidly hydrates bentonite and speed-mixes barite. Each hopper pre-wets product before it is drawn into the mixing chamber for an accelerated mixture.

To ensure the integrity of the mixture, the Mathena Premix Tank design features eductor jets, lightening mixers, and is powered by a 60 horsepower, 5- by 6-inch centrifugal pump. These agitating devices prevent settling of drilling fluid, providing a consistent mixture. We also include a heated doghouse, ventilation fan, lights and steam lines throughout the tank for cold weather climates.

## Performance Features:

- Optional 250-barrel or 270-barrel capacity
- 480 V electrical wiring
- Heated doghouse for colder climates
- Facilitates speed mixing with Golden Throat Hopper and Lobestar Shear/Mixing Hopper
- Designed with two pit stirrers and four radial eductor jets to eliminate settling
- Combats freezing with 1-inch internal steam line

Premix Tank – 270 bbl	
Dimensions (L x W x H):	36'2" x 8'6" x 8'10"
Weight:	30,000 lbs
Tank Capacity (U.S. Gallons):	11,340 gal (270 bbl)
Electric Centrifugal Pump:	5" x 6" 60hp
GPM Rating*	1,200 gpm
Premix Tank – 250 bbl	
Dimensions (L x W x H):	36'2" x 8'6" x 8'10"
Weight:	30,000 lbs
Tank Capacity (U.S. Gallons):	10,500 gal (250 bbl)
Electric Centrifugal Pump:	5" x 6" 60hp
GPM Rating*	1,200 gpm

\*Ratings are based on a U.S. gallon of fresh water at 8.33 lbs.





**Mathena's Gas Vent Line Igniters** can withstand intense heat over long periods of time. They feature a convenient 110-volt control switch that activates a pair of transformers and spark plugs for safe remote ignition. Hardwiring and protective shields ensure durability, while a warning strobe light on the control box enhances operator safety. We offer several configurations to safely meet any gas ignition needs.

### Performance Features:

- Accommodates vent lines varying from 4 to 12 inches
- Varying heights and/or angle configuration
- Convenient power switch on rig floor
- Warning strobe light on igniter control box
- Hardwiring and protective shields for safe, dependable performance
- Safely vent and ignite gas

Standard Igniters	
Diameter:	6"
Length:	15'
Weight:	500 lbs
Diameter:	8"
Length:	9'
Weight:	600 lbs
Diameter:	10"
Length:	9'
Weight:	800 lbs
Diameter:	12"
Length:	9'
Weight:	1,000 lbs
Mobile Igniter System	
Transport Dimensions (L x W x H):	25' x 8'7" x 8'6"
Operating Dimensions (L x W x H):	25' x 8'7" x 32'
Weight:	7,000 lbs
Common Features:	
<ul style="list-style-type: none"> <li>• Power 110 volt</li> <li>• Control Box</li> <li>• Safety Strobe Light Indicator</li> <li>• Remote On/Off Switch</li> </ul>	



*\*Ratings are based on a U.S. gallon of fresh water at 8.33 lbs.*



# Ecological Containment System



Mathena designed the **Ecological Containment System (Eco-Tank)** to alleviate environmental concerns while effectively receiving, containing and disposing of waste gas and fluid.

The international patent pending Eco-Tank design prevents unwanted fluid from contacting the ground surface while providing a single venting and igniting solution for down-hole waste gas.

## Performance Features:

- Able to receive all open lines (2 to 12 inches) from surface control equipment (panic, choke and vent lines)
- Provides environmentally friendly solution by preventing fluid from contacting ground surface
- Eliminates need for multiple igniter systems
- Provides safety check valves to prevent unwanted back draft
- Features a remote vibratone horn and blue light that alerts personnel of fluid levels
- Captures and stores fluid for recycling to active system or appropriate disposal via transfer pumps
- Features 4-inch connections on catch tank for easy clean out

Ecological Containment System	
Transport Dimensions (L x W x H):	20' x 8'6" x 9'5"
Operating Dimensions (L x W x H):	20' x 8'6" x 28'
Weight:	14,500 lbs
*Recommended GPM:	
2" x 3" 5hp	120 gpm
3" x 4" 30hp	500 gpm
Components:	
• Vessel	55 bbl
• Catch Tank	22 bbl
• Electric Centifugal Pump	2 x 3 5hp
• Flapper/Check Valve	10"
• Eco-Tank Manifold	12" x 54"
• Vibratone Horn and Blue Light	Light flashes with alarm when tank becomes full of fluid
Inlets:	(4) - 6"
Outlets:	(1) - 10"
Return:	(1) - 6"

\*Ratings are based on a U.S. gallon of fresh water at 8.33 lbs.





# Trip Tank



The **Mathena Trip Tank** is a floored-top mud pit installed under or near the flow line to monitor the amount of fluid that is displacing the drill pipe when pulling the pipe from the well bore. The tank is filled with drilling fluid and as the drill pipe is pulled from the hole, the fluid is pumped into the well bore and measured to ensure that the displacement volume is equal to the amount of pipe pulled. Going back into the hole, the tank action reverses for equally reliable monitoring of displacement. The hole stays full. Hydrostatic pressure stays constant. The trip stays on track.

### Performance Features:

- Closely monitor fluid levels with highly accurate tank design
- Ensures dependable action with tough, reliable 3 x 4 inches centrifugal pump driven by a 20hp motor
- Safe, easy control with drilling console-mounted electric switch
- Keeps mud stirred and ready with jet line system
- Meticulous construction by our expert staff
- Safety ensured with floored top and hand rails

Trip Tank – 130 bbl	
Dimensions (L x W x H):	22'6" x 7'6" x 7'
Weight:	12,700 lbs
Tank Capacity (U.S. Gallons):	5,460 gal (130 bbl)
Electric Centrifugal Pump:	3" x 4" 20hp
GPM Rating*	500 gpm
Trip Tank – 60 bbl	
Dimensions (L x W x H):	13'10" x 7'6" x 7'
Weight:	8,300 lbs
Tank Capacity (U.S. Gallons):	2,520 gal (60 bbl)
Electric Centrifugal Pump:	3" x 4" 20hp
GPM Rating*	500 gpm
Additional Features:	
<ul style="list-style-type: none"> <li>• Mud Level Gauge – 5 barrel increments</li> <li>• Vibratone Horn – Sounds alarm when tank is getting full</li> <li>• Remote Start / Stop Switch</li> <li>• Top Flooring</li> <li>• Hand Rails</li> <li>• Jet Lines 3" with 2" nipples</li> </ul>	

\*Ratings are based on a U.S. gallon of fresh water at 8.33 lbs.





# Production Pit / Volume Tank



**Mathena Production Pits** feature various capacities – from 125 to 240 barrel – with the ability to expand with the addition of our 200-barrel Volume Tank. These units are easily plumbed together, and when necessary, you can add the required pieces of Mathena equipment to meet all your mud handling needs. Our Production Pits are extremely flexible, featuring a blow barrel, single- to three-screen linear shaker, atmospheric degasser, mud hoppers and single or dual 5- by 6-inch, 60 horsepower centrifugal pumps.

## Performance Features:

- Customizable configurations to serve various drilling and/or production requirements
- 4-inch mud hopper, lights and jets in two of three compartments
- Accommodates additional Mathena equipment
- Includes grated top, lights and hand rails for safe and secure operation
- Expands readily with 200-barrel open-top volume tanks, sized identically to mud pits, equipped with jets and connecting plumbing
- Provides quick and easy setup, minimizing down time

Production Pit – 240 bbl	
Dimensions (L x W x H):	45'10" x 8'6" x 7'10"
Weight:	32,300 lbs
Tank Capacity (U.S. Gallons):	10,080 gal (240 bbl)
Electric Centrifugal Pump:	5" x 6" 60hp
GPM Rating*	1,200 gpm
Production Pit – 185 bbl	
Dimensions (L x W x H):	41'1" x 7' x 7'10"
Weight:	25,000 lbs
Tank Capacity (U.S. Gallons):	7,770 gal (185 bbl)
Electric Centrifugal Pump:	5" x 6" 60hp
GPM Rating*	1,200 gpm
Production Pit – 125 bbl	
Dimensions (L x W x H):	35'8" x 7' x 7'10"
Weight:	19,000 lbs
Tank Capacity (U.S. Gallons):	5,250 gal (125 bbl)
Electric Centrifugal Pump:	5" x 6" 60hp
GPM Rating*	1,200 gpm
Additional Features:	
<ul style="list-style-type: none"> <li>• Blow Barrel</li> <li>• Single Screen to Three Screen Linear Shaker</li> <li>• Atmospheric Degasser</li> <li>• Mud Hoppers</li> <li>• Dual 5" x 6" 60 Horsepower Centrifugal Pump</li> </ul>	

\*Ratings are based on a U.S. gallon of fresh water at 8.33 lbs.



[back to shaker screens homepage](#)



## **Our Customers**

Companies choose Mathena because they know our equipment offers them industry-leading efficiency, durability and ease of use. We support our equipment with prompt and expert service through every phase of the job. We are tried and true surface control experts and we've have been meeting critical needs for professionals in the energy industry for more than 50 years.



Visit [mathena-inc.com](http://mathena-inc.com) for a list of locations or call **800-442-1307** to speak to someone now.

[back to shaker screens homepage](#)

[back to shaker screens homepage](#)



---

*Call our 24-hour response service at 800-442-1307 or visit [www.mathena-inc.com](http://www.mathena-inc.com)*