

PDI - DYNAMIC POWER™

HDD 500 DRILLING RIG



PDI Cost Savings Opportunity



Power Dynamics Innovations LLC

Building 9166

Stennis Space Center

Mississippi, 39529

Telephone 228-689-8560

Email: sales@powerdynamics.com

www.powerdynamicsllc.com

www.marineinches.com

www.offshorepipelaying.com

Subject: Quick Communication: “Dynamic Power” HDD 500, “Huge” Cost Savings Opportunity!

To: Our Valued Customers

From: Carl Liberty, Managing Member

October 15, 2017

We understand and respect your valuable time. We know you are busy and all too often, time constraints play a big part in your decision making process. That is why we have developed this system of “Quick Communications” with our valued customers. We thank you for granting us a few minutes of your valuable time and would welcome feedback as we continue to improve our Customer Value Model.

The attached PDF presentation was developed as a “Quick Communication”. We are now offering our “Ready To Ship” HDD 500 Drilling Rig at a Reduced Price. This would be an opportunity to save as much as \$300,000 off our list price.

Because we want to present this opportunity to all of our customers, we will be accepting offers on this Dynamic Power HDD 500 up until the close of business November 15, 2017. All reasonable “Offers” will be considered. The equipment can be viewed and inspected between October 15th and November 15th. Payment shall be made at the time of delivery. For more information regarding how to submit your offer, please contact Carl Liberty, 228-689-8580 Office, 504-717-0840 cell, or email cliberty@powerdynamicsllc.com.

Last year we notified our customers that our equipment qualifies for the IRS Section 179 deduction, and we are happy to report this deduction remains \$500,000 for 2017. More regarding this deduction can be found at www.section179.org. Essentially, Section 179 of the IRS tax code allows businesses to deduct the full purchase price of qualifying equipment purchased or financed during the tax year. Assuming a 35% tax bracket you could save as much as \$300,000 on your federal taxes.

We believe lowering the market price does not change the value of our products as we also believe our customers are seeking reliable tools that deliver safe operations, increase efficiencies and reduce downtime!

To minimize equipment downtime, PDI offers on-site 24/7 service, not only on the equipment we manufacture but also on our competitor’s equipment. We can mobilize our skilled service technicians within a few hours in most cases.

We believe this “Quick Communications” with the attached PDF presentation would save you and your team’s valuable time in reviewing the value that PDI can deliver with this product offering.

Thank you again for your time in reading this email, we look forward to any opportunity that would put our skills to work supporting the continuous success of your company.

Best regards,

Carl

PDI is now offering our “Ready To Ship” HDD 500 Drilling Rig at a “Reduced Price”. This rig is available to ship today and is being offered below our list price.

If you are considering the purchase of an HDD 500 drilling rig, you won’t want to miss this purchasing opportunity. Third party financing is available to qualified PDI customers.

Because we want to present this opportunity to all of our customers. We will be accepting offers on this Dynamic Power HDD 500 up until the close of business November 15, 2017. All reasonable “Offers” will be considered

The equipment can be view and inspected between October 15th and November 15th. Payment shall be made at the time of delivery. For more information regarding how to submit your offer, please contact Carl Liberty, 228-689-8580 Office, 504-717-0840 cell, or email cliberty@powerdynamicsllc.com

PDI began modifying and repairing other Manufacturer’s HDD’s in 2012. Our customers began to request new units that could be customized in a way that made them **Simple, Reliable and Easy to Maintain**. PDI’s “Dynamic Power” Rig Technology delivers that requirement. This 500 is designed to be upgradeable to a 750 or a 1 M rig.

We believe our customers are seeking reliable tools that deliver safe operations, increase efficiencies and reduce downtime! To minimize equipment downtime, PDI offers on-site 24/7 service. We can mobilize our skilled service technicians within a few hours in most cases.

PDI has developed a line of “DYNAMIC POWER” HDD Drilling Solutions available from 500,000 to 1,000,000 pounds of pull-back. Our expert team of engineers provides superior designs and our skilled craftsmen implement these designs into our “Dynamic Power” Products.

If you are considering the purchase of a drilling rig you won’t want to miss this savings opportunity.



Why Purchase a PDI Custom Engineered HDD Rig?

When you purchase a Power Dynamics Innovations HDD product you get a team of professionals that understands the challenges of the diverse and ever-changing needs of our customers. We believe our client's success is paramount to our continuing business relationships and we can provide maintenance and repair services for our client's HDD Equipment, regardless of the manufacturer.

PDI has thrived on decades of our client's continued desire to use us as an extension of their own capabilities in providing solutions for complex problems. Our HDD Drilling solutions are available from 500,000 to 1,000,000 pounds of pull back. And we are happy to offer this "cost savings opportunity" to our existing and new customers.

As an example of our continuing desire to offer HDD Drilling solutions, PDI is developing our Dynamic Power Pipe Pusher / Puller. This Dynamic Power device increases the versatility of the original HDD method. Our apparatus can recover jammed or defective pipelines with a maximum push / pull force of up to 1 million pounds of additional force.

Acting as a Pipe Pusher / Puller – Our new apparatus assists the HDD in pulling the pipe through the unsupported hole during the pipe installation process. Positioned at the pipe side, our apparatus supports the HDD rig located at the drill side by providing additional force needed during pulling operations. Our clamp design allows for seamless operation with the HDD, automatically freeing itself from the pipe as the HDD rig achieves consistent pulling movement. Our self-engaging wedged clamp design and angle adjustable trailer provides near automatic syncing with HDD operations.

Building time proven, reliable and cost effective custom equipment has been PDI's expertise for over 30 years. Our equipment qualifies for the IRS Section 179 deduction, we are happy to report this deduction remains \$500,000 for 2017. Essentially, Section 179 of the IRS tax code allows businesses to deduct the full purchase price of qualifying equipment purchased or financed during the tax year. You can deduct the FULL PURCHASE PRICE from your gross income. The 179 savings calculator can be found at http://www.section179.org/section_179_calculator.php.

We understand our customer's time is very valuable and we have prepared the following slides to help aid in considering this purchasing opportunity. Our hope is you will allow us a few minutes of your valuable time to present this cost savings opportunity, These slides detail our HDD 500 product offering.



Power Dynamics Innovations, Dynamic Power HDD 500 Drilling Rig

DIMENSIONS (TRANSPORT)

Curb Weight: Approx. 64,000 lbs.

Length: 45 FT.

Width: 8' 6"

Suspension: 60,000 lb. dual axle

Drill Rack Angle: 8.2 - 13 degrees

OPERATIONAL

Max Thrust: 500,000 lbs.

Max Pullback: 500,000 lbs.

Max Spindle Torque: 50,000 FT-lbs.

Max Spindle Speed: 68 rpm

Max Carriage Speed: 70 FT/min

FRONT BREAKOUT VISE

Max clamp torque: 678,000 FT-lbs.

Max rotating torque: 150,000 FT-lbs.

Three jaw clamp

Travel = 72"

REAR BREAKOUT VISE

Max clamp torque: 452,000 FT-lbs.

Thrust/Pullback Circuit

Hydraulic pumps

3 - Sauer Danfoss Series 90

Travel motors

2 - Hagglunds CA-100

Planetary gears: 6" tall x 15" OD

Gearboxes: 2 - Seimens (Flender) PIHA14



POWER SOURCE

Engine: Caterpillar C-27
Gross horsepower (max): 820 HP
Max Engine Speed: 2100 rpm
EPA Certification Family: Tier 2
Fuel Type: Diesel
Fuel Capacity: 1080 Gal
Weight: 30,700 lbs (No Fuel)
Weight: 38,800 lbs (Full Fuel)
Hydraulic Tank Capacity: 450 Gal
Length: 20 FT
Width: 6.33 FT
Height: 10 FT



HYDRAULIC SYSTEM

Pumps

2 Rotary Pumps
3 Travel pumps
1 Vise pump
1 Dedicated rotary flush pump
1 Dedicated kidney loop pump

Rotation Circuit

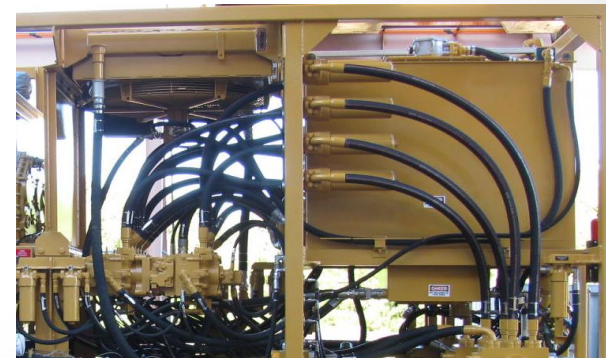
Hydraulic pumps: 2-Sunstrand 90
Hydraulic motor: 1-Hagglunds CA-210

Hydraulic pump:

1-Dedicated kidney loop pump
1-Hydraulic Rotary Flush pump

Auxiliary Circuits

Vise pump (PFC-LS pump):
1-45 Series Sauer Danfoss



Hydraulic Quick Disconnects Parker/Snap-Tite

Heat Exchanger/Cooler

Cold oil 60 psi w/bypass &
w/variable speed fan

Hydraulic Reservoir

450 gal capacity

In-tank filtration

Hot-oil sump to separate hot and
cool oil 3 suction strainers
with shutoffs

Filtration Components

5—25 micron charge pump filters

10-10 micron high press filters

1-25 micron flush filter

1-25 micron vise high psi filter

1-25 micron vise return filter

1-25 micron kidney loop filter

BREAK OUT SYSTEM

UPPER VISE

Dual-cylinder design - 8 “

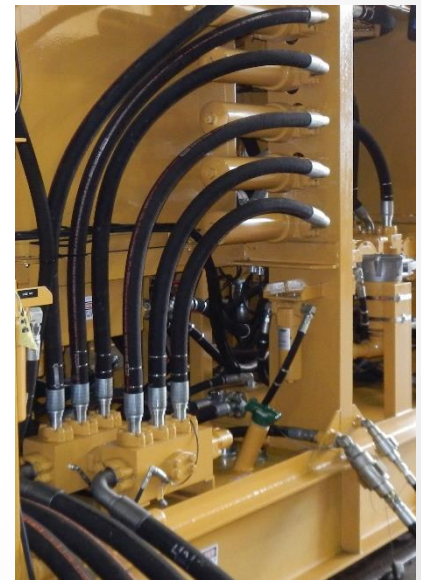
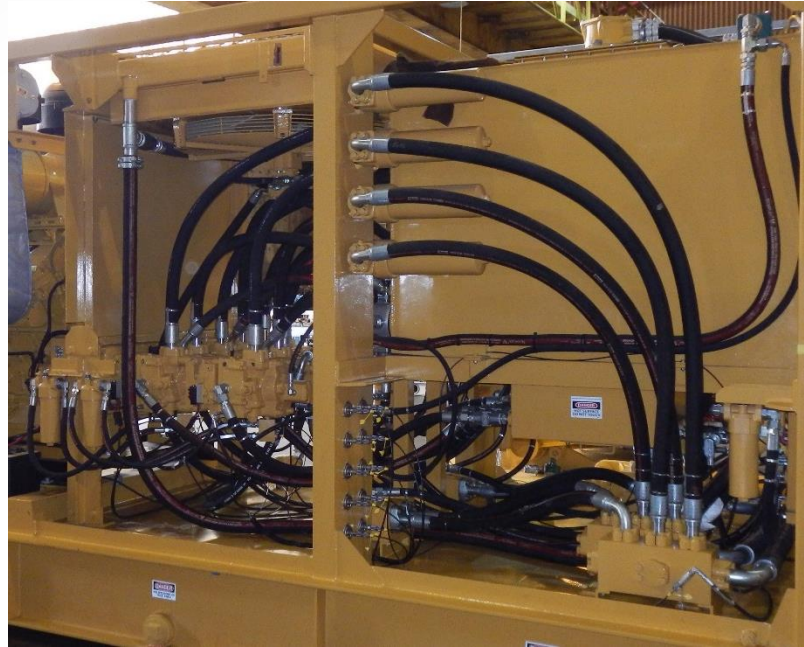
Integrated into carriage to reduce
breakout time

LOWER VISE

Three cylinder design - 8 “,

8.75” insider diameter opening

Travel = 6 ft.



DRILLING CONTROL CAB

Length: 10', Width: 8', Height: 8'4"

Weight: 5500 lbs.

Three windows with steel protective panels

High-density foam insulation

Pressure Gauges: Push, Pull, & Vise

Makeup, 5000 psi ea.

Mud Gauge—2800 psi

Sundstrand Pump Controllers

Torque limiter adjustment for thrust,
pull back, rotary, & vise-makeup

Engine emergency shutdown switches & joystick kill
switches

5 bank Hawe Valve Body

4 bank Hawe Valve Body



RACK GEAR ASSEMBLY -
Double I- beam construction



TRAILER - Double - axle



REAR SUPPORT PAD
16' long x 7'10" wide x 8" high Front to
Rear Stabilizer Rods



FRONT DEADMAN - SMALL
9'6" long x 5' wide x 8" high



An Optional: FRONT DEADMAN- LARGE 16 ' long X
5 wide X 2' high, 2 - 14" spud openings can be ordered along with an
Optional Jacking system.



Power Dynamics Innovations LLC

Partners in Engineering and Manufacturing Solutions

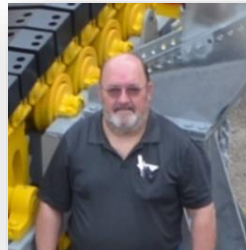
Thank You For your Time and Consideration, we look forward to providing you with our PDI products and services.



Carl Liberty
Managing Partner



Charles La Biche
VP. Of Operations



Larry Metting
VP. of Engineering



James Cash Doug Meyer
Senior Engineer Director Contracts