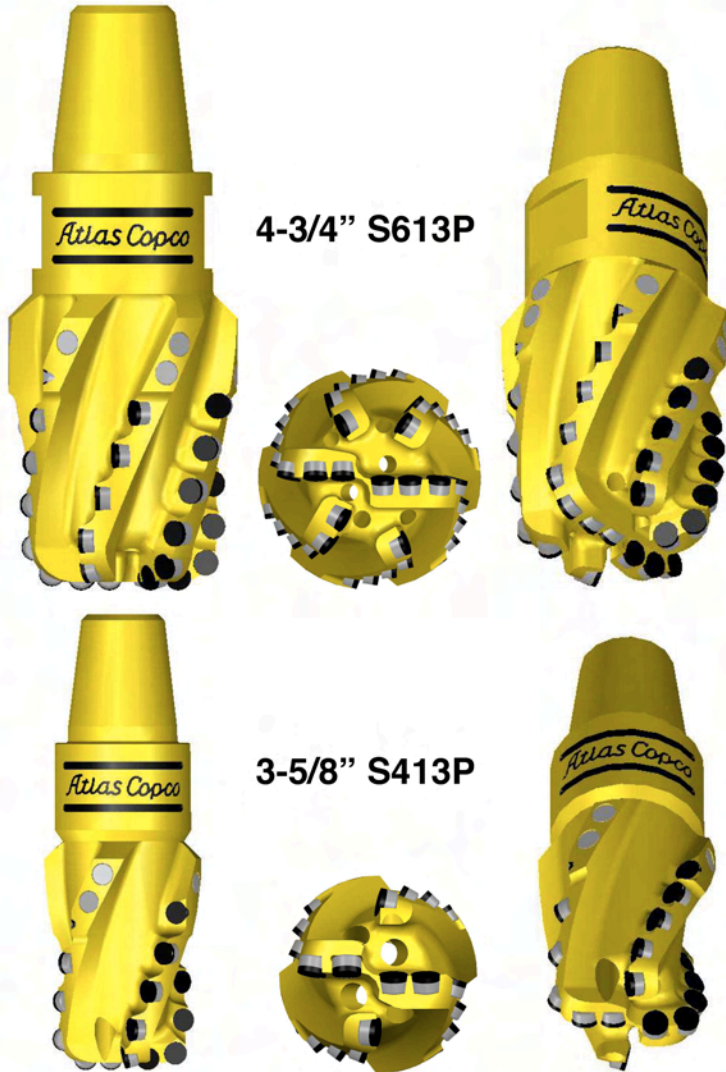


PlugMaster PDC Bits

For drilling hydraulic fracturing plugs

Adding value through performance



4-3/4" S613P

3-5/8" S413P

Applications:

- PlugMaster PDC drill bits are specifically designed for drilling hydraulic fracturing plugs in lateral, vertical and directional wellbores
- Unique spiral blade configuration reduces torque fluctuations and promotes dynamic stability by distributing the cutting forces around the entire bit
- Deep junk slots allow efficient removal of all sizes of cuttings for all plug materials
- One piece steel body construction ensures bit integrity throughout the entire run
- Tungsten Carbide (TC) inserts in the gauge pads provide maximum gauge protection
- Each blade has its own dedicated fluid port for optimum flushing and removal of the cuttings

Design Features:

- 3D designed one-piece 4140 alloy steel body is CNC machined to exact design specifications for maximum blade and body strength
- Cutter locations are optimized for blade count, cutter quantity, hydraulic frac plug drilling conditions and bit stability
- Fluid ports are sized and positioned to maximize hydraulic removal of the cuttings
- Spiral blade configuration allows smooth drilling through the various materials found in frac plugs

Product Specifications:

SIZE	STYLE	Part Number	Number of Blades	Number of 13mm PDCs	Port Size	TFA	Pin Connection
3-5/8"	S413P	88053617	4	20	4 @ 16/32"	0.79 sq in	2-3/8" API Reg
3-3/4"	S413P	88053613	4	21	4 @ 16/32"	0.79 sq in	2-3/8" API Reg
3.800"	S413P	88053614	4	21	4 @ 16/32"	0.79 sq in	2-3/8" API Reg
3-7/8"	S413P	88053618	4	21	4 @ 16/32"	0.79 sq in	2-3/8" API Reg
4-1/2"	S613P	88053538	6	38	6 @ 15/32"	1.04 sq in	2-7/8" API Reg
4-5/8"	S613P	88053468	6	38	6 @ 15/32"	1.04 sq in	2-7/8" API Reg
4-3/4"	S613P	88053467	6	38	6 @ 15/32"	1.04 sq in	2-7/8" API Reg

PlugMaster PDC Bits

3 3/4" S413P

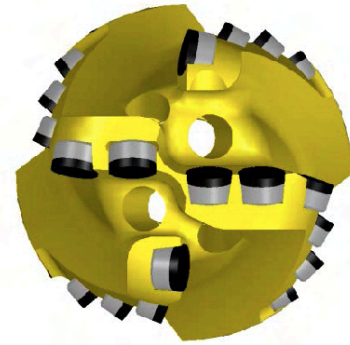
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- Spiral blade configuration allows smooth drilling through the various materials found in frac plugs



Product Specifications:

General Data:

- Body Type	One-piece Steel
- Gage Length	1.7 in / 43.2 mm
- Overall Length	10.7 in / 271.8 mm
- Shipping Weight	14 lbs / 16 kgs
- Product Number	88053613

Cutting Structure:

- Face PDC	21 @ 13 mm
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Connection:

- Pin Connection	2-3/8" API Reg Pin
- Fishneck Diameter	3.13in / 78.7 mm
- Fishneck Length	2.00 in / 50.8 mm
- Make-Up Length	7.7 in / 195.6 mm
- Make-Up Torque	2,300 - 3,000 ft-lbs

Hydraulics:

- Nozzle Type	4 @ 16/32" Ports
- TFA	0.79 in ²

Recommended Operating Parameters:

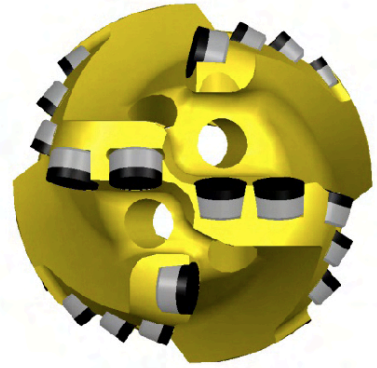
- Weight on Bit (WOB)	2,000 - 10,000 lbs
- Rotary Speed (RPM)	60-500 RPM



PlugMaster PDC Bits

3-5/8" S413P

Adding value through performance



Applications:

- PlugMaster PDC drill bits are specifically designed for drilling hydraulic fracturing plugs in lateral, vertical and directional wellbores
- Unique spiral blade configuration reduces torque fluctuations and promotes dynamic stability by distributing the cutting forces around the entire bit
- Deep junk slots allow efficient removal of all sizes of cuttings for all plug materials
- One piece steel body construction ensures bit integrity throughout the entire run
- Tungsten Carbide (TC) inserts in the gauge pads provide maximum gauge protection
- Each blade has its own dedicated fluid port for optimum flushing and removal of the cuttings

Design Features:

- 3D designed one-piece 4140 alloy steel body is CNC machined to exact design specifications for maximum blade and body strength
- Cutter locations are optimized for blade count, cutter quantity, hydraulic frac plug drilling conditions and bit stability
- Fluid ports are sized and positioned to maximize hydraulic removal of the cuttings
- Spiral blade configuration allows smooth drilling through the various materials found in frac plugs



Product Specifications:

General Data:

- Body Type	One-piece Steel
- Gage Length	1.7 in / 43.2 mm
- Overall Length	10.5 in / 266.7 mm
- Shipping Weight	12.9 lbs / 6.4 kgs
- Product Number	TBD

Cutting Structure:

- Face PDC	20 @ 13 mm
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Connection:

- Pin Connection	2-3/8" API Reg Pin
- Fishneck Diameter	3.13 in / 78.7 mm
- Fishneck Length	2.00 in / 50.8 mm
- Make-Up Length	7.5 in / 190.5 mm
- Make-Up Torque	2,300 - 3,000 ft-lbs

Hydraulics:

- Nozzle Type	4 @ 16/32" Ports
- TFA	0.79 in ²

Recommended Operating Parameters:

- Weight on Bit (WOB)	2,000 - 10,000 lbs
- Rotary Speed (RPM)	60-500 RPM



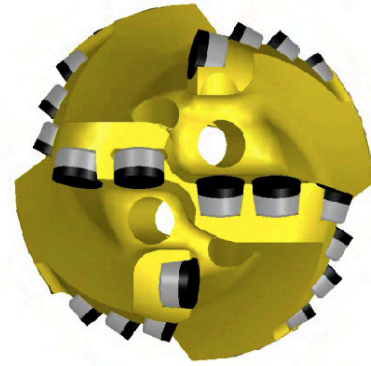
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PlugMaster PDC Bits

3-7/8" S413P

Adding value through performance



Applications:

- PlugMaster PDC drill bits are specifically designed for drilling hydraulic fracturing plugs in lateral, vertical and directional wellbores
- Unique spiral blade configuration reduces torque fluctuations and promotes dynamic stability by distributing the cutting forces around the entire bit
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- One piece steel body construction ensures bit integrity throughout the entire run
- Tungsten Carbide (TC) inserts in the gauge pads provide maximum gauge protection
- Each blade has its own dedicated fluid port for optimum flushing and removal of the cuttings

Design Features:

- 3D designed one-piece 4140 alloy steel body is CNC machined to exact design specifications for maximum blade and body strength
- Cutter locations are optimized for blade count, cutter quantity, hydraulic frac plug drilling conditions and bit stability
- Fluid ports are sized and positioned to maximize hydraulic removal of the cuttings
- Spiral blade configuration allows smooth drilling through the various materials found in frac plugs



Product Specifications:

General Data:

- Body Type	One-piece Steel
- Gage Length	1.7 in / 43.2 mm
- Overall Length	10.7 in / 271.8 mm
- Shipping Weight	13.5 lbs / 6.7 kgs
- Product Number	TBD

Cutting Structure:

- Face PDC	21 @ 13 mm
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Connection:

- Pin Connection	2 -3/8" API Reg Pin
- Fishneck Diameter	3.13 in / 78.7 mm
- Fishneck Length	2.00 in / 50.8 mm
- Make-Up Length	7.7 in / 195.6 mm
- Make-Up Torque	2,300 - 3,000 ft-lbs

Hydraulics:

- Nozzle Type	4 @ 16/32" Ports
- TFA	0.79 in ²

Recommended Operating Parameters:

- Weight on Bit (WOB)	2,000 - 10,000 lbs
- Rotary Speed (RPM)	60-500 RPM



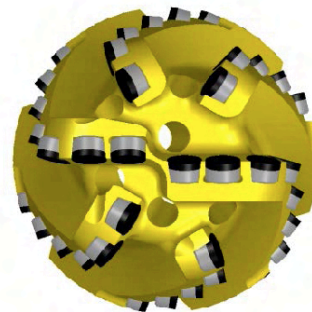
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PlugMaster PDC Bits

4-5/8" D613P

Adding value through performance



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- Each blade has its own dedicated fluid port for optimum flushing and removal of the cuttings

Design Features:

- 3D designed one-piece 4140 alloy steel body is CNC machined to exact design specifications for maximum blade and body strength
- Cutter locations are optimized for blade count, cutter quantity, hydraulic frac plug drilling conditions and bit stability
- Fluid ports are sized and positioned to maximize hydraulic removal of the cuttings
- Spiral blade configuration allows smooth drilling through the various materials found in frac plugs



Product Specifications:

General Data:

- Body Type	One-piece Steel
- Gage Length	1.73 in / 43.2 mm
- Overall Length	12.2 in / 309.9 mm
- Shipping Weight	23 lbs / 10.5 kgs
- Product Number	88053468

Cutting Structure:

- Face PDC	38 @ 13 mm
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Connection:

- Pin Connection	2 7/8" API Reg Pin
- Fishneck Diameter	3.75 in / 96.5 mm
- Fishneck Length	2.47 in / 63.5 mm
- Make-Up Length	8.8 in / 223.5 mm
- Make-Up Torque	3,700 - 4,900 ft-lbs

Hydraulics:

- Nozzle Type	6 @ 15/32" Ports
- TFA	1.04 in ²

Recommended Operating Parameters:

- Weight on Bit (WOB)	2,000 - 10,000 lbs
- Rotary Speed (RPM)	60-500 RPM



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PlugMaster PDC Bits

4-3/4" D613P

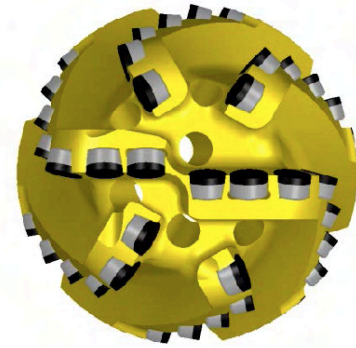
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Applications:

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- Cutter locations are optimized for blade count, cutter quantity, hydraulic frac plug drilling conditions and bit stability
- Fluid ports are sized and positioned to maximize hydraulic removal of the cuttings
- Spiral blade configuration allows smooth drilling through the various materials found in frac plugs



Product Specifications:

General Data:

- Body Type	One-piece Steel
- Gage Length	1.73 in / 43.2 mm
- Overall Length	12.2 in / 309.9 mm
- Shipping Weight	24 lbs / 10.9 kgs
- Product Number	88053467

Cutting Structure:

- Face PDC	38 @ 13 mm
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Connection:

- Pin Connection	2-7/8" API Reg Pin
- Fishneck Diameter	3.75 in / 96.5 mm
- Fishneck Length	2.47 in / 63.5 mm
- Make-Up Length	8.8 in / 223.5 mm
- Make-Up Torque	3,700 - 4,900 ft-lbs

Hydraulics:

- Nozzle Type	6 @ 15/32" Ports
- TFA	1.04 in ²

Recommended Operating Parameters:

- Weight on Bit (WOB)	2,000 - 10,000 lbs
- Rotary Speed (RPM)	60-500 RPM



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