

# 412 Fusion Machines Fusion Capability for 4" IPS – 12" DIPS pipe (110mm – 340mm)

Patent No's. 5,814,182 6,212,748 6,212,747 6,021,832 Japanese Patent No 4285806 European Patent No 0903215 (other patents pending)



## 412

McElroy's 412 line of fusion machines come in multiple model configurations to meet the demands of your pipeline project. They will butt fuse pipe sizes from **4" IPS to 12" DIPS (110mm to 340mm)**. The **Rolling 412** changed the industry when introduced as the first fully self-contained fusion machine in the world. The **TracStar 412** added all-terrain mobility to the unit setting a new industry standard.

The TracStar 412 offers a self-contained, self-propelled tracked vehicle that can handle grades up to 30%. It is the number one choice on the job site for its ease of maneuverability and productivity gains. The **PitBull 412** is used for special applications where the wheeled or tracked vehicle is not needed.

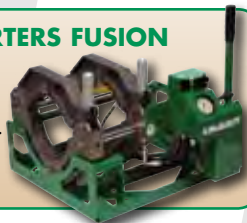
All units incorporate the interchangeable 412 4-jaw carriage, which can be easily removed for in-ditch fusion. For tight installations, the outer fixed jaw and skid can be removed from the carriage converting it to a 3-jaw

carriage for an even more compact fusion unit. These machines can fabricate segmented ells with optional mitered inserts and are DataLogger® compatible.

New to the TracStar 412 is an option that allows automated control and monitoring over the heat, soak, fuse and cool cycles. The **Automated TracStar 412** system guides the operator through a step-by-step procedure for fusing pipe. It has a built-in data logging feature that keeps a record of each fusion joint, which allows you to verify joint integrity.

### IN-DITCH OR CLOSE-QUARTERS FUSION

For all your in-ditch or close-quarters fusions, consider our DynaMc™ line of compact and robust fusion equipment. **See page 88 for more details.**



## Rolling 412

- Wheeled chassis for easy maneuvering on the job site
- Carriage can be easily removed for in-ditch use
- On-board generator for powering heater and other devices
- Gas-powered self-contained or electric models available
- Hydraulic pipe lift aids in loading and unloading pipe
- DataLogger® compatible
- Hydraulic Clamping available

## TracStar® 412

- Self-contained, self-propelled, all-terrain
- Powered by a 20 HP liquid-cooled diesel engine
- Carriage can be easily removed for in-ditch use
- On-board generator for powering heater
- Dual hydraulic pipe lifts aid in handling pipe
- Fits in a standard long box truck bed for easy transport
- DataLogger® compatible
- Also available as an Automated fusion machine
- Hydraulic Clamping available

## PitBull® 412

- Compact fusion for special applications
- Hydraulic Power Unit (HPU) sold separately
- DataLogger® compatible

**MACHINE PLUG TYPE**  
To find the right electrical plug type see  
**Page 139**

**GENERATOR**  
To size your generator see  
**Page 145**

**CYLINDER FORCE**  
For help selecting a cylinder force see  
**Page 131**

**DataLogger**  
To learn more about the DataLogger see  
**Page 108**



Visit the Fusion Experts at [www.mcelroy.com](http://www.mcelroy.com)

Machine Type	Model No. *	Cylinder Force	Input Voltage Requirements	Minimum Power Requirements *	Plug Type **
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## Rolling 412

Includes fusion machine, facer, heater, insulated heater stand, 12" IPS butt fusion inserts and lifting assembly.



Rolling	A1248101	High	N/A, On-Board Generator	N/A, Self-Contained Gasoline	N/A
Rolling	A1248102	Medium	N/A, On-Board Generator	N/A, Self-Contained Gasoline	N/A
Rolling	A1248103	Low	N/A, On-Board Generator	N/A, Self-Contained Gasoline	N/A
Rolling Electric	A1248104	High	220V - 240V, 50/60Hz, 3Ph	6.2KVA/5.8KW	F
Rolling Electric	A1248105	Medium	220V - 240V, 50/60Hz, 3Ph	6.2KVA/5.8KW	F
Rolling Electric	A1248106	Low	220V - 240V, 50/60Hz, 3Ph	6.2KVA/5.8KW	F

\* A Hydraulic Clamping kit is available for all rolling 412 models, to purchase a machine equipped with this add **HC** to the end of the part number. For more information, see page 112.

## TracStar® 412

Includes fusion machine, facer, heater, insulated heater stand, 12" IPS butt fusion inserts and lifting assembly.



Tracked	AT1212902	High	N/A, On-Board Generator	N/A, Self-Contained Diesel	N/A
Tracked	AT1212901	Medium	N/A, On-Board Generator	N/A, Self-Contained Diesel	N/A
Tracked	AT1212903	Low	N/A, On-Board Generator	N/A, Self-Contained Diesel	N/A

Automated Tracked	AT1213202	High	N/A, On-Board Generator	N/A, Self-Contained Diesel	N/A
Automated Tracked	AT1213201	Medium	N/A, On-Board Generator	N/A, Self-Contained Diesel	N/A
Automated Tracked	AT1213203	Low	N/A, On-Board Generator	N/A, Self-Contained Diesel	N/A

\* A Hydraulic Clamping kit is available for all TracStar 412 models, to purchase a machine equipped with this add **HC** to the end of the part number. For more information, see page 112.

## PitBull® 412

Includes fusion carriage, facer, heater, insulated heater stand and 12" IPS butt fusion inserts. HPU which includes extension hoses and lifting assembly sold separately.



In-ditch	AT1213002	High	240V, 50/60Hz, 1Ph	3KW	C
In-ditch	AT1213001	Medium	240V, 50/60Hz, 1Ph	3KW	C
In-ditch	AT1213003	Low	240V, 50/60Hz, 1Ph	3KW	C
HPU	T1810901	N/A	240V, 60Hz, 1Ph	HPU 4.9KVA/4.8KW, PitBull + HPU 7.9KVA/7.8KW	G
HPU	T1810902	N/A	220V - 240V, 50/60Hz, 3Ph	HPU 5.2KVA/4.5KW, PitBull + HPU 8.2KVA/7.5KW	D

\* This is the minimum generator requirement at sea level, see your generator supplier or refer to the generator sizing form on page 145.

\*\* Refer to the plug type reference chart on page 139 for your correct plug type.



### Save Time and Increase Productivity

One of the more popular features of large-diameter MegaMc® fusion machines is the hydraulic clamping that tightens the jaw clamps. Now, users can retrofit their Rolling and TracStar 412s, as well as their Rolling and TracStar 618s and TracStar 500 Series IIs, with hydraulic clamping that replaces the standard manual crank clamp knobs.

See page 112

# 412 Accessories

Part No.	Description
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### Spare 4.63" Facer Blade Set - 6 blades, screws and wrench



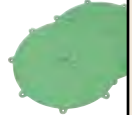
Economical blade must be positioned for different pipe sizes.	
T1208603	Standard blades.
T1208603C	Extended-life blades.

### Spare 6.13" Facer Blade Set - 6 blades, screws and wrench



Spans the entire facer range without repositioning.	
T1208610	Standard blades.
T1208610C	Extended-life blades.

### Spare Heater Plate Kit



A1242108	Set of 2 plates with anti-stick coating required for butt fusion. Kit includes attaching screws and wrench.
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### Pipe Support Stand - See page 103 for more information



1223201	Adjustable pipe stand to properly support, position and align pipe to be fused.
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### PolyHorse™ - To learn more, see page 100

**NEW!**



1875502	PolyHorse with PowerAssist
1875501	Standard PolyHorse

### Low Profile Rollers - To learn more, see page 104

**NEW!**



A1867501	Aids by reducing the drag on the pipe and protecting the pipe from damage. Case includes 40 complete roller assemblies.
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### DataLogger® - To learn more, see page 108



Used to record and document fusion process parameters.	
DL6303	Wireless DataLogger
DL6304	Wired DataLogger

**NEW!**

Part No.	Description
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### Spare Heater 220-240V, 50/60Hz, 1Ph See legend below



S	1242112	Microprocessor controlled with dial thermometer to monitor temperature. Includes heater plates insulated heater stand and stripper bars.
A	T1213301	

### Pyrometer Kit



A218804	Accurately checks surface temperatures of heater.
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### 25' Hydraulic Extension Hoses



1219105	Set of four 25' hydraulic extension hoses required for in-ditch fusion. Extension hoses are included with PitBull HPU.
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### 25' Heater Extension Cord 240V, 1Ph, 15A



1219002	For use with non-automated machines when fusing in-ditch. Plug type C.
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### Spare Facer Stand



T1201101	Facer stand provides a convenient place to protect and store your facer out of the dirt and mud.
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### Heat Shield



203007	For fusing two materials with different melt rates. Shields the faster melt rate materials from over melting.
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### Stub End Holder - To learn more, see page 114

**NEW!**



1270101	Self-centering stub end holder to hold stub end for butt fusion.
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Part No.	Description
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### Shipping Container



1816502	For Rolling 412.
T5009102	For TracStar 412.

## Auto-Only Accessories

### Automated In-Ditch Extension Kit



T5002003	Set of four 25' hydraulic extension hoses, extension cable and pendant strap. This kit is required for automated in-ditch fusion.
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### Spare Automated Pendant



T5007109	Spare user interface for Automated TracStars 28, 250, 412, 618 and 500.
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### Spare Automated Control Box



T5001808	Spare control box for quick replacement. For use with Automated TracStars 28, 250, 412, 618 and 500.
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### Spare Automated USB Thumb Drive & Adapter



AT5040101	Used for downloading fusion records from the Automated Pendant to a USB thumb drive.
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### SPARE HEATER LEGEND

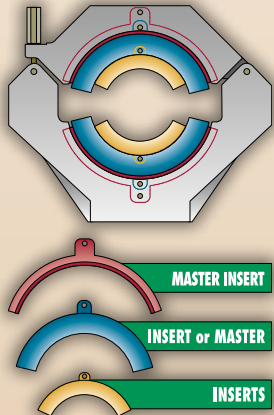
- S** Heater for 412, PitBull & TracStar 412
- A** Heater for Automated TracStar 412

## Butt Fusion Inserts

Our cast inserts have been surface-hardened for longer life. All inserts are serrated for maximum grip on the pipe. Inserts are made for one size pipe only. Not all inserts fit directly in the jaws. Some inserts nest inside other inserts, called master inserts.

**NOTE:** Other sizes of inserts are available upon request. Contact your McElroy representative about inserts to fit your needs.

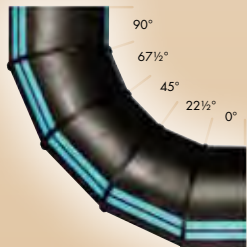
For JIS insert sizes, see page 126.



## Mitered Inserts

Mitered inserts are used to fabricate segmented ells. Our standard miter is 11¼°, other mitered angles are available upon request.

**Standard Ell Configuration**  
90° Ell 11¼° miter shown



### Butt Fusion Inserts Set = 8 Inserts

All inserts below fit in 12" DIPS 13.20" (335mm) Jaws

Inserts	Pipe OD	Set No.
12" IPS Master	12.75 (324mm)	Inc w/pkg

All inserts below require 12" IPS Master insert

315mm	12.40 (315mm)	1211202
10" DIPS	11.10 (282mm)	1207221
280mm	11.02 (280mm)	1207205
10" IPS	10.75 (273mm)	1207204
250mm	9.84 (250mm)	1213503
8" DIPS	9.05 (230mm)	1207107
225mm	8.86 (225mm)	1207010
8" IPS	8.63 (219mm)	1207104
200mm	7.87 (200mm)	1207009
7.125"/180mm OD	7.13 (180mm)	1207008
6" DIPS	6.90 (175mm)	1207020
6" IPS Master	6.63 (168mm)	1207007
160mm	6.30 (160mm)	1207011

All inserts below require 6" & 12" IPS Master inserts

5" IPS	5.56 (141mm)	809409
140mm	5.51 (140mm)	809428
5.375"	5.38 (137mm)	809411
5.25"	5.25 (133mm)	809410
125mm	4.92 (125mm)	809413
4" DIPS	4.80 (122mm)	809315
4" IPS	4.50 (114mm)	809408
110mm	4.33 (110mm)	809305

### 11¼° Mitered Inserts Set = 4 Inserts & 1 Template

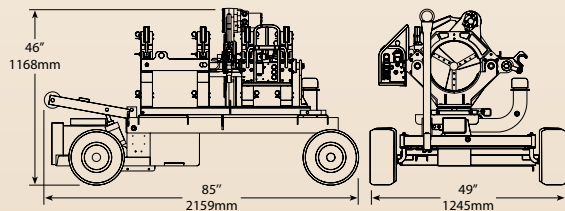
All inserts below fit in 12" DIPS 13.20" (335mm) Jaws

Inserts	Pipe OD	Set No.
12" IPS Master	12.75 (324mm)	Inc w/pkg

All inserts below require 12" IPS Master insert

280mm	11.02 (280mm)	1214284
10" IPS	10.75 (273mm)	1214232
250mm	9.84 (250mm)	1214235
8" DIPS	9.05 (230mm)	1214269
225mm	8.86 (225mm)	1214281
8" IPS	8.63 (219mm)	1214230
200mm	7.87 (200mm)	1214234
180mm	7.09 (180mm)	1214290
6" DIPS	6.90 (175mm)	1214275
6" IPS	6.63 (168mm)	1214228
160mm	6.30 (160mm)	1214239
5" IPS/140mm	5.56 (141mm)	1214242
125mm	4.92 (125mm)	12142108
4" DIPS	4.80 (122mm)	1214287
4" IPS	4.50 (114mm)	1214226
110mm	4.33 (110mm)	1214255

## Rolling 412 Gas Powered



### CAPACITY

Fuses Pipe Sizes: ..... 4"IPS – 12"DIPS (110mm – 340mm)

### WEIGHT

Machine: ..... 1225 lbs (556Kg)  
 4 Jaw Carriage Configuration: ..... 359 lbs (163Kg)  
 3 Jaw Carriage Configuration: ..... 261 lbs (118.4Kg)  
 Facer: ..... 62 lbs (28.1Kg)  
 Heater: ..... 24 lbs (10.9Kg)

### HYDRAULICS

System Pressure: ..... 1200 PSI (82.74 BAR) Max.  
 Hydraulic Reservoir Capacity: ..... 6 Gallons (22.71 Liters)

### ENGINE

Engine Type: ..... 18HP Air Cooled V-Twin  
 Fuel Type: ..... Gasoline  
 Fuel Tank Capacity: ..... 5 Gallons (18.92 Liters)  
 Operational Tank Capacity: ..... 8 Hours  
 Starting System: ..... Electric

### ELECTRICAL

Input: ..... None, self-contained  
 AC Output: ..... 2 receptacles 240V each

### POWER

Heater Power: ..... 3000 Watt  
 Facer Power: ..... Hydraulic

### CHASSIS

Frame: ..... Welded steel tube construction  
 Front Axle: ..... Articulating  
 Brake: ..... Mechanical

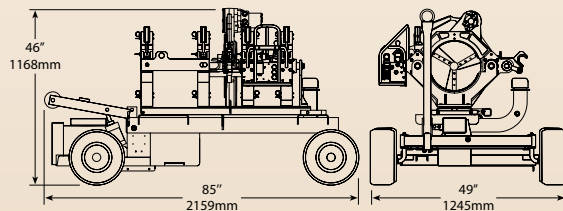
### MOBILITY

Tires: ..... High-flotation Inflatable Tires  
 Transportation: ..... Pulled via towing ring  
 Lifting ..... Lift points and lifting assembly

### WARRANTY

Term: ..... 3 Years, see page 5 for details

## Rolling 412 Electric Powered



### CAPACITY

Fuses Pipe Sizes: ..... 4"IPS – 12"DIPS (110mm – 340mm)

### WEIGHT

Machine: ..... 915 lbs (415Kg)  
 4 Jaw Carriage Configuration: ..... 359 lbs (163Kg)  
 3 Jaw Carriage Configuration: ..... 261 lbs (118.4Kg)  
 Facer: ..... 62 lbs (28.1Kg)  
 Heater: ..... 24 lbs (10.9Kg)

### HYDRAULICS

System Pressure: ..... 1200 PSI (82.74 BAR) Max.  
 Hydraulic Reservoir Capacity: ..... 6 Gallons (22.71 Liters)

### POWER

Heater Power: ..... 3000 Watt  
 Facer Power: ..... Hydraulic  
 Electric Motor: ..... 3 HP

### CHASSIS

Frame: ..... Welded steel tube construction  
 Front Axle: ..... Articulating  
 Brake: ..... Mechanical

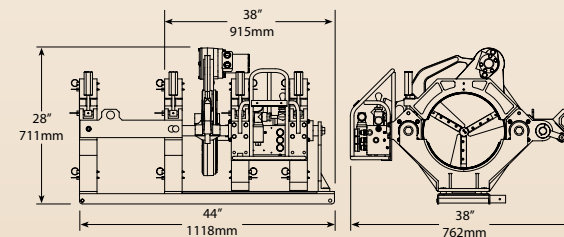
### MOBILITY

Tires: ..... High-flotation Inflatable Tires  
 Transportation: ..... Pulled via towing ring  
 Lifting ..... Lift points and lifting assembly

### WARRANTY

Term: ..... 3 Years, see page 5 for details

## PitBull® 412



### CAPACITY

Fuses Pipe Sizes: ..... 4"IPS – 12"DIPS (110mm – 340mm)

### WEIGHT

4 Jaw Carriage Configuration: ..... 359 lbs (163Kg)  
 3 Jaw Carriage Configuration: ..... 281 lbs (118.4Kg)  
 Facer: ..... 62 lbs (28.1Kg)  
 Heater: ..... 24 lbs (10.9Kg)

### POWER

Heater Power: ..... 3000 Watt  
 Facer Power: ..... Hydraulic

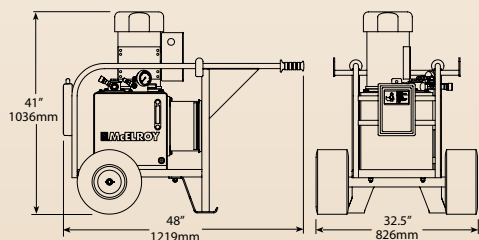
### CHASSIS

Frame: ..... Welded steel construction

### WARRANTY

Term: ..... 3 Years, see page 5 for details

## HPU (Hydraulic Power Unit)



### WEIGHT

Machine: ..... 390 lbs (176.9Kg)

### HYDRAULICS

System Pressure: ..... 1500 PSI (103.42 BAR) Max.

Hydraulic Reservoir Capacity: ..... 10 Gallons (37 Liters)

Pump Flow Rate 60 Hz: ..... 6.1 gpm (23.1 Lpm)

Pump Flow Rate 50 Hz: ..... 5.0 gpm (18.9 Lpm)

Fluid: ..... Exxon Univis N46 or equivalent

Filtration: ..... 10 micron absolute

### POWER

Power Requirement: ..... 5.2KVA/4.5Watt

### MOTOR

Electric: ..... 5 HP

### MOBILITY

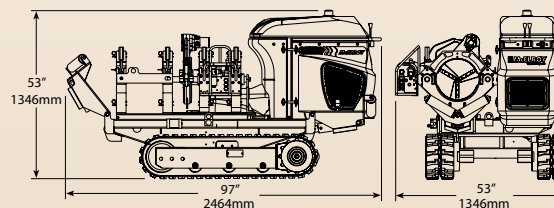
Tires: ..... High-flotation Inflatable Tires

Transportation: ..... Two wheel cart

### WARRANTY

Term: ..... 3 Years, see page 5 for details

## TracStar® 412



### CAPACITY

Fuses Pipe Sizes: ..... 4"IPS – 12"DIPS (110mm – 340mm)

### WEIGHT

Machine: ..... 2000 lbs (907Kg)

4 Jaw Carriage Configuration: ..... 359 lbs (163Kg)

3 Jaw Carriage Configuration: ..... 261 lbs (118.4Kg)

Facer: ..... 62 lbs (28.1Kg)

Heater: ..... 24 lbs (10.9Kg)

### HYDRAULICS

System Pressure: ..... 2000 PSI (137.90 BAR) Max.

Hydraulic Reservoir Capacity: ..... 8 Gallons (30.28 Liters)

### ENGINE

Engine Type: ..... 20 HP liquid cooled

Fuel Type: ..... Diesel

Fuel Tank Capacity: ..... 5 Gallons (18.92 Liters)

Operational Tank Capacity: ..... 8 Hours

Starting System: ..... Electric

### ELECTRICAL

Input: ..... None, self-contained

AC Output: ..... 120V & 240V, 60Hz, 15Amp

### POWER

Heater Power: ..... 3000 Watt

Facer Power: ..... Hydraulic

### CHASSIS

Frame: ..... Welded steel construction

Brake: ..... Self-locking

### MOBILITY

Tracked: ..... Rubber crawler tracks

Transportation: ..... Self-propelled

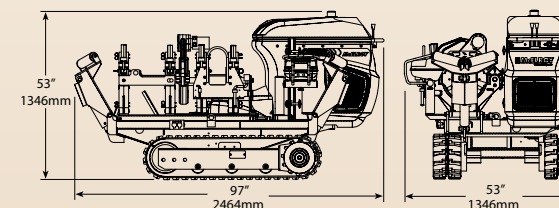
Vehicle speed: ..... 1.5 Mph Max.

Lifting ..... Lift points and lifting assembly

### WARRANTY

Term: ..... 3 Years, see page 5 for details

## Automated TracStar® 412



### CAPACITY

Fuses Pipe Sizes: ..... 4"IPS – 12"DIPS (110mm – 340mm)

### WEIGHT

Machine: ..... 2000 lbs (907Kg)

4 Jaw Carriage Configuration: ..... 359 lbs (163Kg)

3 Jaw Carriage Configuration: ..... 261 lbs (118.4Kg)

Facer: ..... 62 lbs (28.1Kg)

Heater: ..... 24 lbs (10.9Kg)

### HYDRAULICS

System Pressure: ..... 2000 PSI (137.90 BAR) Max.

Hydraulic Reservoir Capacity: ..... 8 Gallons (30.28 Liters)

### ENGINE

Engine Type: ..... 20 HP liquid cooled

Fuel Type: ..... Diesel

Fuel Tank Capacity: ..... 5 Gallons (18.92 Liters)

Operational Tank Capacity: ..... 8 Hours

Starting System: ..... Electric

### ELECTRICAL

Input: ..... None, Self-contained

### POWER

Heater Power: ..... 3000 Watt

Facer Power: ..... Hydraulic

### CHASSIS

Frame: ..... Welded steel construction

Brake: ..... Self-locking

### MOBILITY

Tracked: ..... Rubber crawler tracks

Transportation: ..... Self-propelled

Vehicle speed: ..... 1.5 Mph Max.

Lifting ..... Lift points and lifting assembly

### WARRANTY

Term: ..... 3 Years, see page 5 for details