## PIPE BURSTING SUCCESS STARTS HERE

**GRUNDOCRACK® PNEUMATIC PIPE BURSTING SYSTEM**

**The right tool for the job**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Rear Flare Diameter (in.)</th>
<th>Length (ft.)</th>
<th>Weight (lbs.)</th>
<th>Strokes/Minute</th>
<th>Air Cons. (cfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taurus® - 24&quot; dia.</td>
<td>26.3</td>
<td>144</td>
<td>10,580</td>
<td>180</td>
<td>1,766</td>
</tr>
<tr>
<td>Galaxie® - 18&quot; dia.</td>
<td>20</td>
<td>112</td>
<td>5,434</td>
<td>180</td>
<td>1,236</td>
</tr>
<tr>
<td>XE 350 - 15&quot; dia.</td>
<td>N/A</td>
<td>102</td>
<td>3,375</td>
<td>220</td>
<td>706</td>
</tr>
<tr>
<td>PCG 370 - 11&quot; dia.</td>
<td>N/A</td>
<td>84</td>
<td>1,540</td>
<td>310</td>
<td>424</td>
</tr>
<tr>
<td>HV 230 - 9&quot; dia.</td>
<td>N/A</td>
<td>79</td>
<td>965</td>
<td>300</td>
<td>283</td>
</tr>
<tr>
<td>PCG 310 - 8.34&quot; dia.</td>
<td>N/A</td>
<td>89</td>
<td>886</td>
<td>290</td>
<td>229</td>
</tr>
<tr>
<td>PCG 160 - 7&quot; dia.</td>
<td>N/A</td>
<td>66</td>
<td>490</td>
<td>280</td>
<td>159</td>
</tr>
<tr>
<td>PCG 140 - 5.75&quot; dia.</td>
<td>N/A</td>
<td>60</td>
<td>370</td>
<td>330</td>
<td>117</td>
</tr>
<tr>
<td>PCG 120 - 5&quot; dia.</td>
<td>N/A</td>
<td>50.5</td>
<td>237</td>
<td>350</td>
<td>92</td>
</tr>
<tr>
<td>Mini-Master - 5&quot; dia.</td>
<td>6</td>
<td>36</td>
<td>132</td>
<td>580</td>
<td>60</td>
</tr>
<tr>
<td>PCF 150 - 5&quot; dia.</td>
<td>6.2</td>
<td>53.5</td>
<td>209</td>
<td>320</td>
<td>95</td>
</tr>
<tr>
<td>Titan® - 5.75&quot; dia.</td>
<td>6.9</td>
<td>61</td>
<td>302</td>
<td>263</td>
<td>141</td>
</tr>
<tr>
<td>PCG 145 - 5.7&quot; dia.</td>
<td>6.9</td>
<td>63</td>
<td>302</td>
<td>310</td>
<td>141</td>
</tr>
<tr>
<td>Mini-Olympus® - 7&quot; dia.</td>
<td>8.5</td>
<td>44.5</td>
<td>385</td>
<td>500</td>
<td>124</td>
</tr>
<tr>
<td>PCF 160 - 7&quot; dia.</td>
<td>8.3</td>
<td>66.5</td>
<td>507</td>
<td>280</td>
<td>159</td>
</tr>
<tr>
<td>Olympus® - 7&quot; dia.</td>
<td>8.3</td>
<td>66.5</td>
<td>507</td>
<td>280</td>
<td>159</td>
</tr>
<tr>
<td>PCF 230 - 8.4&quot; dia.</td>
<td>9.8</td>
<td>77</td>
<td>811</td>
<td>340</td>
<td>282</td>
</tr>
<tr>
<td>Hercules® - 8.5&quot; dia.</td>
<td>9.8</td>
<td>75</td>
<td>811</td>
<td>340</td>
<td>282</td>
</tr>
<tr>
<td>Mini-Gigant® - 10&quot; dia.</td>
<td>13</td>
<td>69</td>
<td>1,016</td>
<td>430</td>
<td>353</td>
</tr>
<tr>
<td>Gigant® - 10&quot; dia.</td>
<td>11.8</td>
<td>79</td>
<td>1,356</td>
<td>310</td>
<td>424</td>
</tr>
<tr>
<td>Kolos® - 14&quot; dia.</td>
<td>15.7</td>
<td>92</td>
<td>2,661</td>
<td>230</td>
<td>706</td>
</tr>
<tr>
<td>Galaxie® - 18&quot; dia.</td>
<td>20</td>
<td>112</td>
<td>5,434</td>
<td>180</td>
<td>1,236</td>
</tr>
<tr>
<td>Taurus® - 24&quot; dia.</td>
<td>26.3</td>
<td>144</td>
<td>10,580</td>
<td>180</td>
<td>1,766</td>
</tr>
<tr>
<td>Apollo® - 25&quot; dia.</td>
<td>3.5</td>
<td>178</td>
<td>25,000</td>
<td>180</td>
<td>3,500</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

TT Technologies is the world leader in pipe bursting equipment and experience. For over almost 40 years contractors have relied upon GRUNDOCRACK pneumatic pipe bursting systems to help them refurbish failing infrastructure. Superior quality materials and unparalleled experience go into each GRUNDOCRACK pipe bursting tool.
BURSTING SUCCESS
FOR GAS, WATER, SEWER, ELECTRIC & MORE

Since 1980, thousands of miles of pipe have been successfully replaced using pipe bursting equipment from TT Technologies. The GRUNDOCRACK system is effectively for existing pipes that are undersized or have failed beyond the possibility of point repair. The GRUNDOCRACK can be used to burst fracturable pipes. Tools are capable of bursting and replacing pipe from 4 inches to 54 inches in diameter. Pipe bursting is the only trenchless method of replacement that allows for the upsizing of the original pipe.

Simple, Effective Process
During pneumatic pipe bursting, the GRUNDOCRACK is placed into the host pipe at an entry pit or manhole. A constant tension GRUNDOWINCH, based at the exit area pit and attached to the head of the tool, guides it through the host pipe. Continuous percussion from the pneumatic tool fractures the host pipe. The combined effect of the percussion action of the GRUNDOCRACK and constant tension from the GRUNDOWINCH enables the tool to effectively hammer its way through the host pipe, displacing the fragments into the surrounding soil, while simultaneously pulling the new pipe, usually High Density Polyethylene (HDPE), into place behind it.

Guide Head - A Guide to Bursting Success
A guide head attached to the front of the GRUNDOCRACK pipe bursting tool aids needed tool length, allowing the tool to get into the pipe and break it at its weakest point, the inside. Besides adding tool length, the guide head helps protect the winch line. Cutting blades can be used in conjunction with a guide head, allowing the tool to successfully burst difficult host pipes.

GRUNDOCRACK bursts a range of fracturable pipes.

Replace size-for-size or upsize!
- Vitrified Clay Pipe (VCP)
- Reinforced Concrete Pipe (RCP)
- Asbestos Cement Pipe (ACP)
- Cast Iron
- PVC

USE GRUNDOCRACK FOR THE REPLACEMENT OF THESE UTILITIES:
- GAS
- WATER
- SEWER
- POWER

REVERSE REMOVAL
GRUNDOCRACK straight barrel tools (PCG) can be reversed automatically with a quick throw of a lever on the in-line lubricator. Once the burst is complete, the expander is removed and the tool is reversed out through the newly installed PE pipe. Eliminating the need for an exit pit, this method is perfect for bursting to a manhole or from manhole to manhole. The speed and convenience of this method can reduce costs dramatically in many applications.

Straight barrel tools are ideal for same-size bursting including 6-inch through 18-inch diameter pipes. Seven different size diameter straight barrel tools are available from TT Technologies with automatic reverse capabilities.

USE GRUNDOCRACK FOR THE REPLACEMENT OF THESE UTILITIES:

PIPE BURSTING COMPONENTS & ACCESSORIES

In-Line Lubrication
In-line Lubricator provides a continuous source of lubrication to ensure long life and maximum performance of GRUNDOCRACK pneumatic tools.

Grundo-Oil®
Synthetic Lubricant
GRUNDO-OIL from TT Technologies is specially formulated for all pneumatic tools, including the GRUNDOCRACK pneumatic pipe bursting system. GRUNDO-OIL ensures smooth operation of air tools and will not deteriorate air hoses or plastic pipe. Available in summer grade and winter grade formulas.

Pipe Bursting Expanders
Each tool is effective in bursting a wide range of pipe diameters through the use of a variety of expanders. Expanders available in front and rear types are custom fit to the bursting tool for upsizing applications.

GRUNDOMUDD®
Bentonite Mixing System
GRUNDOMUDD portable Bentonite mixing/delivery systems use a Venturi mixer/filtration system to quickly mix Bentonite and other fluid lubricants. An in-tank re-circulating valve prevents the mixture from settling. In addition to mixing, the GRUNDOMUDD is equipped with a high performance pumping system to appropriately deliver the fluid mixture. GRUNDOMUDD systems come standard in 225-, Twin 225- and 500-gallon capacity models.
BURSTING SUCCESS
FOR GAS, WATER, SEWER, ELECTRIC & MORE
Since 1980, thousands of miles of pipe have been successfully replaced using pipe bursting equipment from TT Technologies. The GRUNDOCRACK system is effective for existing pipes that are undersized or have failed beyond the possibility of point repair. The GRUNDOCRACK can be used to burst fracturable pipes. Tools are capable of bursting and replacing pipe from 4 inches to 54 inches in diameter. Pipe bursting is the only trenchless method of replacement that allows for the upsizing of the original pipe.

Simple, Effective Process
During pneumatic pipe bursting, the GRUNDOCRACK is placed into the host pipe at an entry pit or manhole. A constant tension GRUNDOWINCH, based at the exit area pit and attached to the head of the tool, guides it through the host pipe. Continuous percussion from the pneumatic tool fractures the host pipe. The combined effect of the percussive action of the GRUNDOCRACK and constant tension from the GRUNDOWINCH enables the tool to effectively hammer its way through the host pipe, displacing the fragments into the surrounding soil, while simultaneously pulling the new pipe, usually High Density Polyethylene (HDPE), into place behind it.

Guide Head - A Guide to Bursting Success
A guide head attached to the front of the GRUNDOCRACK pipe bursting tool aids needed tool length, allowing the tool to get into the pipe and break it at its weakest point, the inside. Besides adding tool length, the guide head helps protect the winch line. Cutting blades can be used in conjunction with a guide head, allowing the tool to successfully burst difficult host pipes.

Replace size-for-size or upsize!
- Vitrified Clay Pipe (VCP)
- Reinforced Concrete Pipe (RCP)
- Asbestos Cement Pipe (ACP)
- Cast Iron
- PVC

Pipe Size Range 4” - 48”

THE PROVEN
PIPE BURSTING SYSTEM

GRUNDOCRACK bursts a range of fracturable pipes.

USE GRUNDOCRACK FOR THE REPLACEMENT OF THESE UTILITIES:
- GAS
- WATER
- SEWER
- POWER

REVERSE REMOVAL
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Straight barrel tools are ideal for same-size bursting including 6-inch through 10-inch diameter pipes. Seven different size diameter straight barrel tools are available from TT Technologies with automatic reverse capabilities.

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- WATER
- SEWER
- POWER

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The GRUNDOWINCH® Constant Tension Winch
The constant tension, variable speed GRUNDOWINCH makes adjustments for conditions that affect line speed during operation, providing constant and consistent pulling force and preventing slack from developing in the line. The GRUNDOWINCH’s exclusive design incorporates twin capstans with twin motors and gearboxes to protect the cable and cable drum from extreme stress levels.

GRUNDOMUDD®
Bentonite Mixing System
GRUNDOMUDD portable Bentonite mixing/delivery systems use a Venturi mixer/filtration system to quickly mix Bentonite and other fluid lubricants. An in-tank recirculating valve prevents the mixture from settling. In addition to mixing, the GRUNDOMUDD is equipped with a high performance pumping system to appropriately deliver the fluid mixture. GRUNDOMUDD systems come standard in 225, Twin 225- and 500-gallon capacity models.
### Specifications

<table>
<thead>
<tr>
<th>Tool Name</th>
<th>Diameter (in)</th>
<th>Length (in)</th>
<th>Weight (lbs)</th>
<th>Strokes/Minute</th>
<th>Air Cons. (cfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hercules - 8.5&quot; dia.</td>
<td>8.5</td>
<td>44.5</td>
<td>385</td>
<td>500</td>
<td>124</td>
</tr>
<tr>
<td>Minigigant - 10&quot; dia.</td>
<td>10</td>
<td>1,006</td>
<td>430</td>
<td>550</td>
<td>255</td>
</tr>
<tr>
<td>Apollo - 32&quot; dia.</td>
<td>32</td>
<td>44</td>
<td>1,000</td>
<td>200</td>
<td>80</td>
</tr>
<tr>
<td>PCG 180 - 7&quot; dia.</td>
<td>N/A</td>
<td>84</td>
<td>1,540</td>
<td>300</td>
<td>283</td>
</tr>
<tr>
<td>Apollo - 25&quot; dia.</td>
<td>25</td>
<td>178</td>
<td>25,000</td>
<td>180</td>
<td>3,500</td>
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