

# Upsize Tooling - Powered Cutter Head



**Part No. FA43100F (Model PCH 20), Part No. FA42850F (Model PCH 22.5), FA47952F (Model PCH 30.5)**

- **Designed To Work in 96" Minimum ID or Trenchbox Shafts** •
- **Independent Drives For Rotation & Spoil Removal** •
- **Controlled By GBM Operator In Launch Shaft** •



## FEATURES

- The PCH 20 is an upsizing tool to match 20" product pipe (15" VCP). Increaser kits available to 22.5" OD.
- The PCH 22.5 is an upsizing tool to match 22.5" product pipe (18" VCP). Increaser kits available to 28" OD.
- The PCH 30.5 is an upsizing tool to match 30.5" product pipe (24" VCP). Increaser kits available to 36" OD.
- Separate lubrication lines on cutter head reduce jacking forces on pipe and lubricate cutter face for ease of spoils removal.
- Operates with standard jacking frame and P100Q/P150Q power unit with minimal modifications to jacking frame hydraulics.
- Spoils are discharged to reception shaft.
- Product pipe length dependent only on shaft size.
- Product pipe length does not change tooling.
- Uses standard GBM 11" OD thrust casings.

## SPECIFICATIONS

Assembly Length ..... 72 in. (1,829 mm)

Two sections may be launched separately

### Diameter

#### Powered Cutter Head Body

PCH 20 ..... 20 in. (508 mm)

PCH 22.5 ..... 22.5 in. (572 mm)

PCH 30.5 ..... 30.5 in. (775 mm)

Overcut ..... 1.5 in. (38 mm)

### Weight (approximate)

#### Front Section

PCH 20 ..... 1,800 lbs. (816.5 kg)

PCH 22.5 ..... 2,000 lbs. (907 kg)

PCH 30.5 ..... 3,500 lbs. (1,588 kg)

#### Rear Section

PCH 20 ..... 900 lbs. (408 kg)

PCH 22.5 ..... 1,000 lbs. (454 kg)

PCH 30.5 ..... 2,200 lbs. (998 kg)

### Drive System

#### Auger Drive

Max. Torque .... 10,500 ft-lbs (14,238 N·m)

Max. Speed ..... 40 rpm

#### Cutterface Power

PCH 20 ..... 32 HP (24 kW)

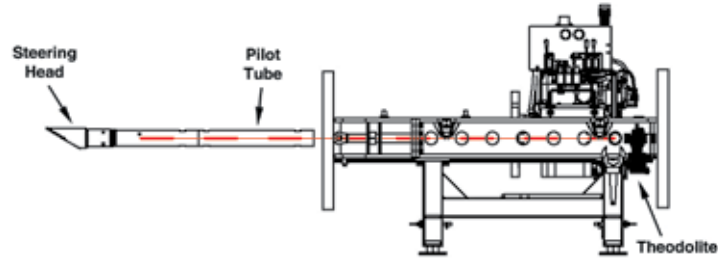
PCH 22.5 ..... 48 HP (36 kW)

PCH 30.5 ..... 61 HP (45.5 kW)

# GUIDED BORING METHOD WITH POWERED CUTTER HEAD

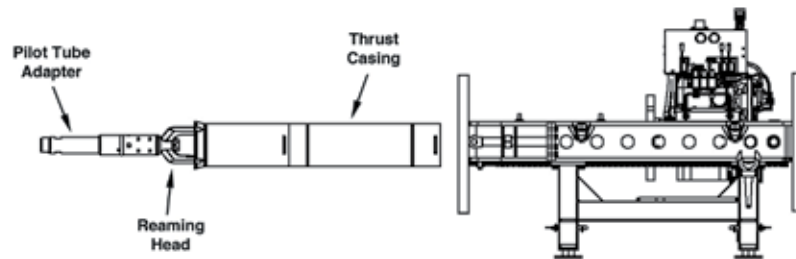
## Step 1: PRECISE INSTALLATION OF PILOT TUBES

The first step is the installation of the pilot tube on line and grade.



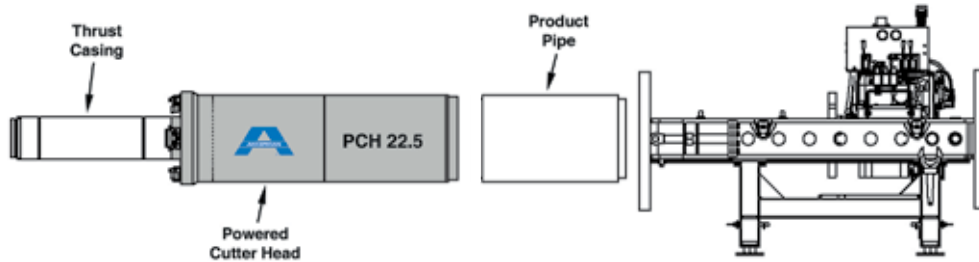
## Step 2: ADVANCING THRUST CASINGS ALONG PILOT TUBE PATH

The second step is to follow the pilot tube with a reaming head or other upsizing tool and standard thrust casings.



## Step 3: INSTALLATION OF PRODUCT PIPE WITH POWERED CUTTER HEAD

In the third step, the powered cutter head follows the thrust casings to increase the bore to match the product pipe diameter.



Powered Cutter Head In Launch Position



Drive Complete With Powered Cutter Head In Reception Shaft



Spoils Discharged In Reception Shaft