

# TAM

## Circulating Packer Gets Casing to Bottom Faster

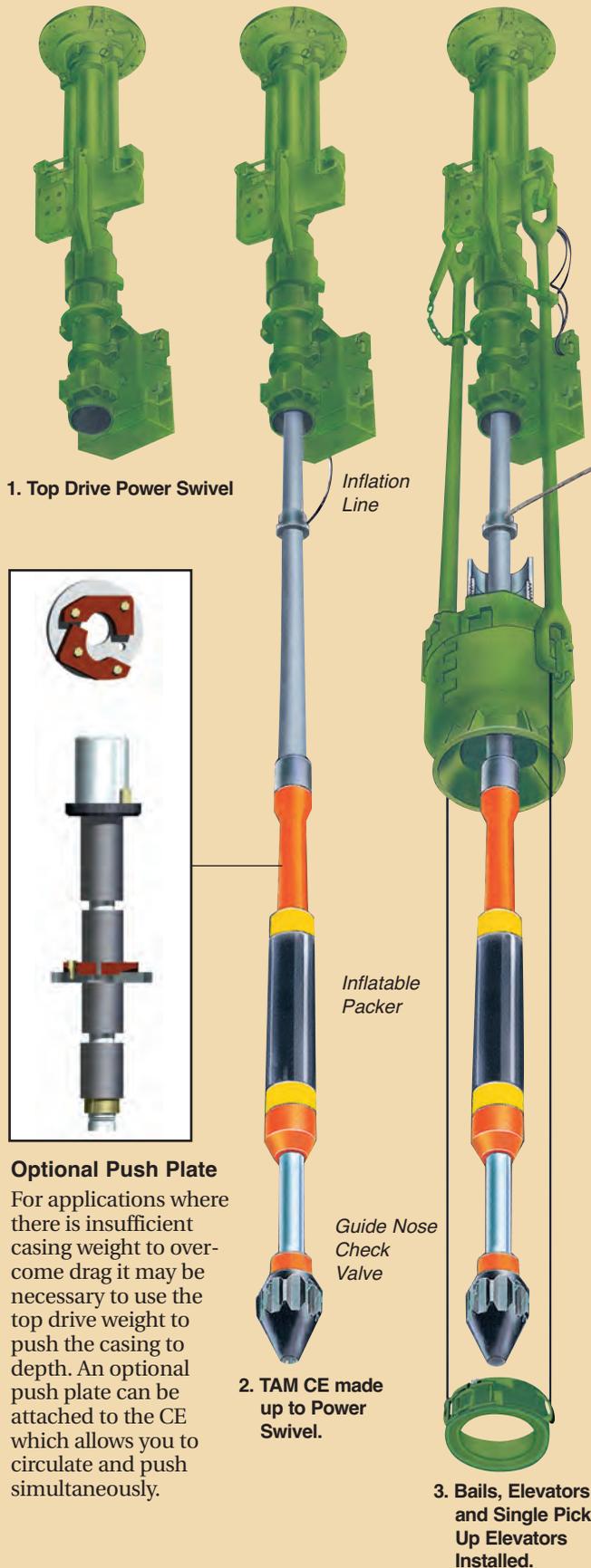
- Runs as an integral part of casing operations with minimal installation.
- Fills the casing while running. No separate fill up line required.
- Converts quickly to circulating mode. No need to set slips.
- Internal check valve prevents mud from dripping on rig floor.
- For top and non-top drive rigs.



**TAM INTERNATIONAL**  
Inflatable and Swellable Packers

# Saves Rig Time While Running Casing

## Top Drive Rig Up Sequence



## The Fastest Means to Circulate Available

With the growing number of high angle and horizontal wells, getting casing to bottom is more difficult than ever. The use of the traditional mud fill-up line to establish circulation is functional but slow and can require elevated rig up operations. When you encounter a tight section, the time and difficulty associated with a circulating head and other circulating tools can be significant. The last thing you want to do is stop moving the casing to install a circulating or fill-up device.



For normal casing operations, each joint is filled through the TAM Casing Circulating Packer\* (CE) reducing fill up time by more than 1/2 a minute per joint. Should the casing string become stuck, the CE allows you to safely establish circulation in less than a minute without having to set the slips and/or send a man into the derrick.

## Field Proven Savings

The TAM Casing Circulating Packer most often pays for itself as a time-saver for filling casing while running. The average reduction in rig time savings when the CE is in the filling mode has been estimated at over one half minute per joint. In a 12,000 ft. well without problems lowering the casing, the TAM CE will pay for itself in time savings alone. However, the primary advantage of the CE is the ability to establish circulation quickly, safely and repeatedly in the event the casing is difficult to get to bottom.

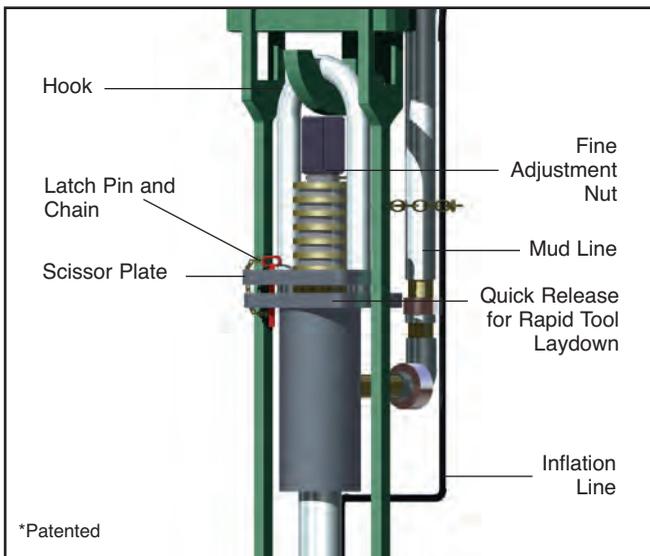
## Installs Easily On All Rig Designs

Whether the CE is installed on a top drive or conventional rig, installation is simple and safe. Due to the expansion ratio of the inflatable packer, a mixed string of casing diameters can be run without having to change out the tool. (Example: 9 5/8" x 10 3/4"). Also, non-standard sizes can be run by standard TAM tools (example: 14" casing). See chart on back panel.

**For top drive rigs**, the CE is made up to the power swivel via a 4 1/2" IF connection with a separate hydraulic line to inflate the packer element. The hydraulic line runs from the TAM supplied pump console to the inflatable packer element on the CE.

**For non top drive rigs**, the TAM adapter kit provides a hydraulic line for the packer inflation fluid and mud hose to connect to the stand pipe. The CE adapter is hung and secured on the hook, between the casing bails. A range of scissor plate notches facilitate spacing of the CE in relation to the elevators. Upon completion of casing operations, the tool can be easily removed via a latch pin on the scissor plates.

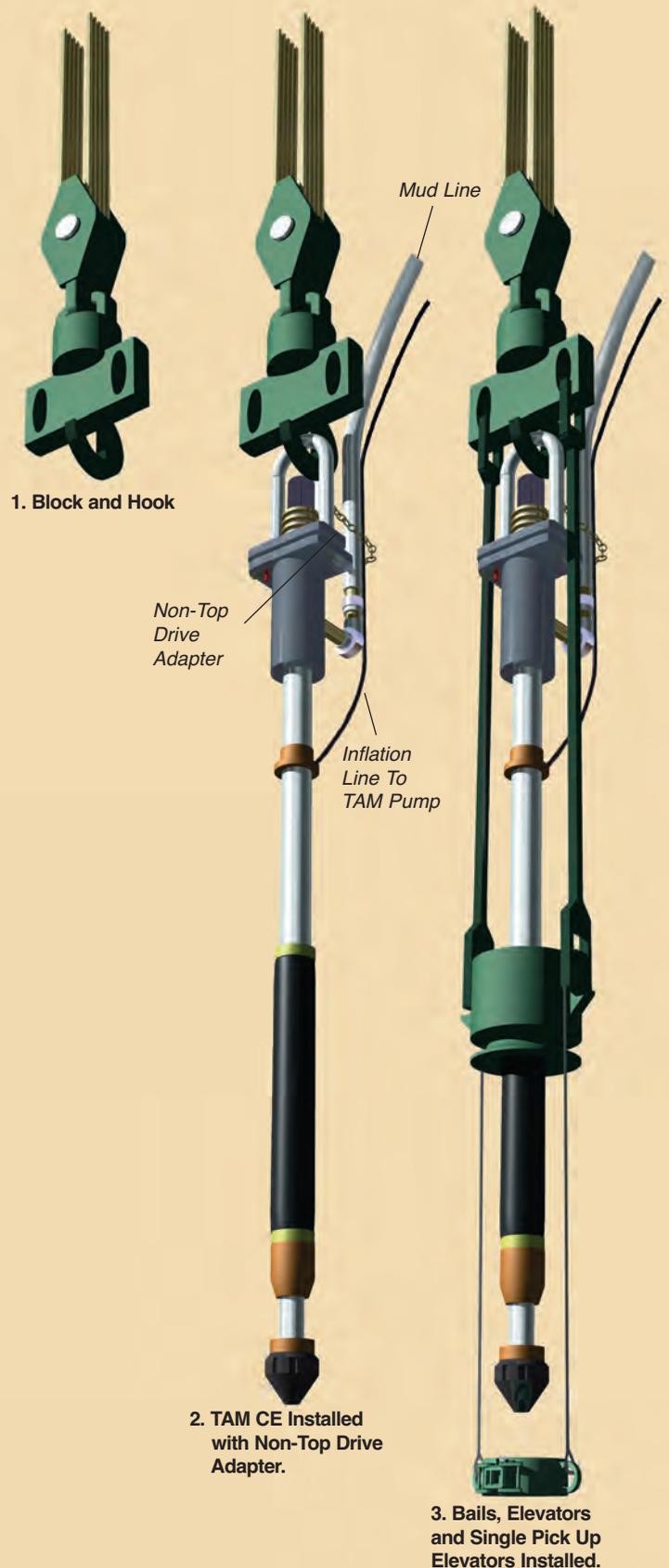
## Non-Top Drive Adapter Kit\*



## Other Important Operational Advantages

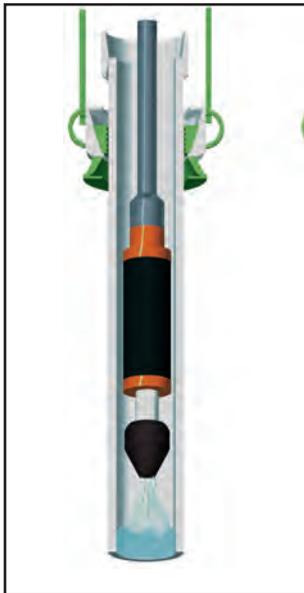
A single TAM CE can run a range of casing sizes and weights. Thread types, coupling diameters and exotic casing materials do not affect the running of this tool. Initiating circulation is fast and can be achieved regardless of the position of the casing joint. Unlike competitors' products it is not required to set the casing slips, unlatch the elevators, move the tool down, latch the elevators and pull the casing slips prior to initiating the circulation. The CE can also be used to control backflow in tight holes where annular clearance limits flow alongside the casing.

## Non Top Drive Rig Up Sequence

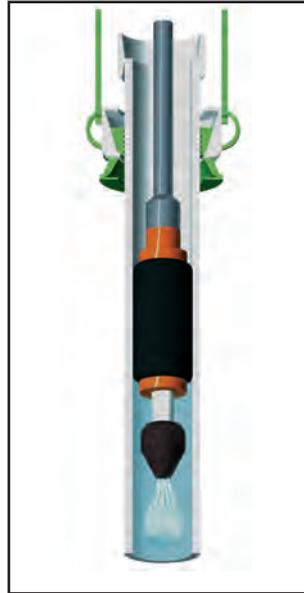


## To Fill Casing

To fill the casing, simply pump through the top drive (or non-top drive TAM adapter) and CE. When the pumps are turned off, the check valve inside the packer will close, preventing mud dripping onto the rig floor.



Filling Casing  
Packer Uninflated



Circulating Casing  
Packer Inflated

## To Circulate the Casing

- Using the TAM pump, inflate the CE by moving the console mounted control valve to the ON position.  
**NOTE:** The output pressure is preset and the pressure gauge on the control panel will indicate the inflation pressure in the packer.
- Apply mud pump pressure. Establish circulation and then lower casing joint.
- Set slips; stop circulating.
- Slowly open a valve on the standpipe manifold back to the mud pits and leave open.
- Bleed off the inflate pressure at the TAM pump by moving the control valve to the OFF position. Allow the packer to deflate prior to pulling out the casing.
- Unlatch elevators and pull up.
- Close valve on stand pipe manifold.
- Pick up next joint of casing and make up.
- Stab the CE into the top of casing joint and latch elevators.
- Repeat steps 2 through 9 as required or simply fill the casing as required.

## Ordering Information

An assembly with a 4 1/2" IF box up is standard for all casing sizes through 30". Inflation element and guide nose O.D.'s vary for different casing sizes.

When ordering please specify:

- Top Drive or Non-Top Drive Rig
- Casing Size to be run
- Bail Length
- On Non-Top Drive Rigs, specify hook size.

TAM casing circulating packers are available for rental only. They are available from any TAM location on a call out or a long term lease basis. TAM service personnel are also available to assist in installation, training and operation.

## Maximum Circulating Pressure Rating CE Tool & Elements

Packer O.D.		Casing O.D.		Working Pressure	
in.	mm	in.	mm	PSI	BAR
3 1/16	77.8	4 1/2	114.3	4000	276
		5	127.0	3500	241
		5 1/2	139.7	2500	172
		5 3/4	146.0	2500	172
5 1/16	128.6	6 5/8	168.3	4000	276
		7	177.8	3800	262
		7 5/8	193.7	3000	207
		8 5/8	219.1	1800	124
7	177.8	9 5/8	244.5	4000	276
		10 3/4	273.1	2800	193
		11 3/4	298.5	2000	138
10	254	13 3/8	339.7	3200	221
		14	355.6	2800	193
		16	406.4	2500	172
14	355.6	16	406.4	2000	138
		18 5/8	473.1	1200	83
		20	508	1000	69
16	406.4	18 5/8	743.1	1200	83
		20	508	1000	69
		24	609.8	700	48
22	558.8	26	660.4	350	24
		28	711.2	350	24
		30	762	350	24

**NOTE:** Operating data for the individual tools listed is for informational purposes only. Contact TAM service personnel for operating data specific to your job application.



**TAM INTERNATIONAL**

1-800-462-7617  
1-713-462-7617  
1-713-462-1536  
info@tamintl.com

**Worldwide sales and service contacts at [www.tamintl.com](http://www.tamintl.com)**

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