

Power Tongs

Efficient makeup and breakout of threaded connections

Applications

- Drill pipe, casing, tubing, riser, and other strings of the well
- Running and pulling tubular operations
- Onshore and offshore operations
- Power tongs suitable for tubular ODs 1.05 to 22 in.

Features & Benefits

- Ability to provide tongs to meet specific requirements, such as:
 - Continuous, full rotation, makeup
 - Running expandable tubulars
 - Dual completion tongs with hydraulic backup
 - Capable of low/non-marking makeup at high torques
- Casing and tubing tongs include critical safety interlocks
- Models available with integral backup (IBU) systems
- Compatible with LeadHand™ positioning systems for safer operations
- Compact design saving rig space
- High-torque tongs for makeup of tubulars, up to 150,000 ftlb

Baker Hughes maintains a wide range of casing and tubing tongs around the world to meet every customer-specific power tong requirement.

Baker Hughes power tongs are built with several safety features and are supplied in two types, Single tongs, or integral backup (IBU) tongs.

Single tongs offer the advantage of being lighter and therefore easier to handle by rig floor personnel. They do require the use of a snubbing line and other equipment, such as a suitable spider or rig tong to react torque.

Power tongs with IBU are most commonly used, as they are self-contained tools. These tongs can even be used in conjunction with a LeadHand™ tong positioning system to aid in removing people from the red zone.

The power tongs are hydraulically powered by Baker Hughes's compact zoned electric or diesel power units and/or hydraulic manifold.

We aim to meet our customers' power tong needs, whether they are for conventional or specialty tongs, such as our dual completion tongs. Unique tongs are also available for screen liners and drillpipe makeup and breakout.

Compatibilities

Power tongs are also offered with the complete ChromeMaster™ non-marking jaw system, which is suitable for sizes up to 14 in.

Baker Hughes offers an array of power tongs with integrated hydraulic backups to handle tubulars up to 23 in. diameter. These backups provide extra control for the makeup of premium

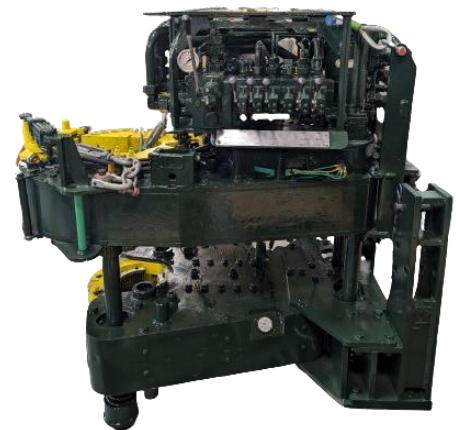


Figure 2 – 8.625-in. and 85,000 ftlb power tong.

connections and reduce the possibility of misalignment. All power tongs include door safety switches, which prevent the tong from being able to rotate if the door is open.

Power tongs can be used in conjunction with Baker Hughes torque-turn systems such as Flora™ connection evaluation system (CES) or SALVO™ to provide a record of tubular makeup.



Figure 1 – Single power tong.

Technical specifications						
Tubular OD range	Max Torque	Weight	Compatibility with chrome tubulars	Compatible with ChromeMaster™	Automation capability	Control*
1.05 to 4.5 in.	8,500 ftlb	1,700 lb (771 kg)	Yes	No	Manual	Conventional
1.66 to 3.5 in.	6,500 ftlb	1,179 lb (536 kg)	No	No	Manual	Conventional
1.75 to 4 in.	7,000 ftlb	1,400 lb (635 kg)	Yes	Yes	Manual	Conventional
2.375 to 5.5 in.	25,000 ftlb	2,800 lb (1,270 kg)	Yes	Yes	Manual	Conventional
2.375 to 7.625 in.	25,000 ftlb	2,200 lb (1,000 kg)	Yes	No	Manual	Conventional
2.375 to 8.625 in.	85,000 ftlb	5,700 lb (2,585 kg)	Yes	No	Automatic	Remote
2.375 to 8.625 in.	35,000 ftlb	2,700 lb (1,226 kg)	Yes	No	Manual	Conventional
2.375 to 8.625 in.	25,000 ftlb	4,925 lb (2,238 kg)	Yes	Yes	Mechanized	Remote
4 to 16 in.	25,000 ftlb	2,300 lb (1,043 kg)	Yes	No	Manual	Conventional
6.625 to 14 in.	50,000 ftlb	5,291 lb (2,399 kg)	Yes	Yes	Manual	Conventional
7 to 14 in.	100,000 ftlb	7,034 lb (3,191 kg)	Yes	Yes	Automatic	Remote
7 to 14 in.	75,000 ftlb	8,000 lb (3,632 kg)	Yes	Yes	Mechanized	Remote
7 to 20 in.	50,000 ftlb	6,900 lb (3,129 kg)	Yes	No	Mechanized	Remote
9.625 to 20 in.	80,000 ftlb	3,900 lb (1,769 kg)	No	No	Manual	Conventional
10.75 to 22 in.	150,000 ftlb	13,800 lb (6,260 kg)	Yes	No	Automatic	Remote
9.625 to 26 in.	60,000 ftlb	5,000 lb (2,260 kg)	Yes	No	Manual	Conventional
16 to 30 in.	85,600 ftlb	6,900 lb (3,105 kg)	No	No	Manual	Conventional

* All tongs can be converted to remote control with mechanized automation.



Figure 3 – 22-in. and 150,000 ftlb power tong.

Special applications

Screen liner tongs – In many cases when running gravel pack screens, flush joint connections are used with limited tong gripping area. This gives an opportunity to shorten the length of the tong gripping area between the screens. This change increases the productive area of the screens across the production zones where long sections of screens are run.

Tongs for running expandable casing

– Expandable casing presents a number of challenges for its makeup and running. Because the pipe becomes deformed from its original size, careful handling is required.

Drillpipe tong with hydraulic backup

– Compact package ideal to makeup and breakout all standard drillpipe connections. Each connection is done in a continuous operation because it is a full rotary power tong with only one gear change to makeup to final torque.

Safety and handling

Before handling, transporting, or use, review the Owner's Manual for guidance.