



SILK PORTABLE CASING CUTTER

Silk Engineering has had many years of solving on-site machining problems by supplying customers with standard and specialty design machine tools.

Recently, Silk Engineering has designed a range of Casing Cutting Machines for use in the Offshore and Onshore Oil and Gas industry. These machines offer a quick, safe and effective method for cutting and profiling casings on wellheads.



Internal Case Cutting Arrangement

METHOD

The Silk Case Cutting Machine offers several distinct advantages, including internal or external cutting operation, accurate cutting height, clean precise finish and greatly reduced cutting time. A typical clean, square cut and chamfer on both edges can be achieved in approximately one third of the time normally required for such an operation.

Furthermore, since no burning is involved possible hazards created by the presence of oil-based muds are reduced to a minimum.

DESIGN

The Silk Case Cutting Machines are of strong, rigid design with a flat back suitable for positioning on the top face of a wellhead irrespective of the type of flange or hub. Machines are available to cover a range of casing sizes from 20" (508mm) external and 18-5/8" (473mm) internal. Each machine covers two or three casing sizes within this range.

Designed to provide accurate, flat and square results with an extensive trouble free life, each machine consists of two basic sections, the main body which carries the air power drive and mounting arrangements and the top section which rotates within the main body and carries the cutting tools. For applications requiring internal cutting of the casing, an additional bar adapter is available. This fits inside the drive ring and mounts in the bore of the casing and incorporates a gripping and centering mechanism as well as an adjustable cutting tool holder for positioning in the exact cutter location.

The main sections of the machine are designed to split into two halves, allowing the whole unit to be mounted quickly and simply by wrapping it around the casing. Machines are also provided with a range of clamps ensuring that they can be clamped to each casing size as well as fixed to all clamp type connectors and API flanges used on wellhead equipment.



External Case Cutting Arrangement

The machines cutting arrangement comprises three cutting tools and is such that only one operation is required to cut through the casing and form the chamfer. There is no need for any roughing cuts, nor is it necessary to drain the casing prior to cutting, since the machine is easily cleaned after flooding with mud.

Some modern wellhead designs call for specific profiles to be cut on casing to accommodate particular sealing devices or in preparation for a metal-metal seal. Silk offers special attachments to form profiles on most casing sizes.



Clam Shell Orientation

DIMENSIONS

Max. Rotational Diam.	20.5"	(520mm)
Min. Rotational Diam.	9.0"	(228mm)
Cutter Depth Tool Travel	2.0"	(58mm)
Height	87.0"	(2200mm)
Cutter Tool Travel	2.76"	(70mm)
Weight - drive ring	289lbs.	(131Kg)
Weight – cutter bar	352lbs.	(160Kg)
Power Output	3.5Hp	(2.63Kw)
Min. Air Supply	80Cfm @ 80Psi	(5bar)
Rotational Speed	20Rpm	

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