



Tubing Cutters for 1.660 in. - 2.875 in. Tubing

MAN-REC-CUT (R06)

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Tubing Cutters for 1.660 in. - 2.875 in. Tubing





Overview

Description

Tubing Cutters are designed to cut tubing during Pipe Recovery Operations. Owen is now manufacturing the GOEX designed Tubing Cutters under the CUT-XXXX-400 designated part number.

Operation

Tubing Cutters provide a quick and effective solution to sever tubing in the removal of stuck pipe. These cutters utilize manufacturing and packaging processes to allow easy shipment and fast delivery to the customer.

Tubing Cutters should be used when tubing becomes stuck in the well. The cutter with the largest possible diameter capable of running in the well should be chosen to achieve maximum performance. A gauge run is recommended prior to running the tool to prevent any safety concerns like sticking a live cutter in the well or “spudding” with explosive tools. The Tubing Cutters are designed to be shot in the tubular above the stuck point, but not in the collar. To maintain the maximum allowable performance from the cutter, it should be centralized. A de-centralized cutter may result in a partial cut and/or damage to the casing. It is also recommended that tension be applied to the tubing prior to detonation of the Tubing Cutter to assist in the removal of stuck tubulars.

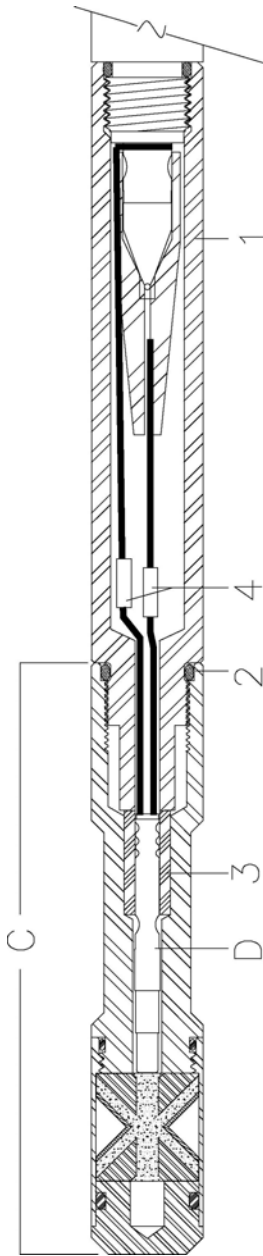
Owen Oil Tools' Tubing Cutters utilize explosive technology and are designed to explosively sever tubular members when initiated by an Owen's Resistorized Bridge™ Detonator. Owen's electrical detonators adhere to API RP-67 specifications. All safety rules and regulations should be strictly followed when storing, handling, assembling, and using these cutters and/or detonators. Safety precautions should be taken in accordance with your company's safety policies, governmental regulations, and the American Petroleum Institute Recommended Practice 67 (API RP-67).

Owen's Tubing Cutters come standard with HMX explosive powder rated to 400° F (204° C) for 1 hour. Cutters are also available with HNS [500° F (260° C) - 1 hour] by special order

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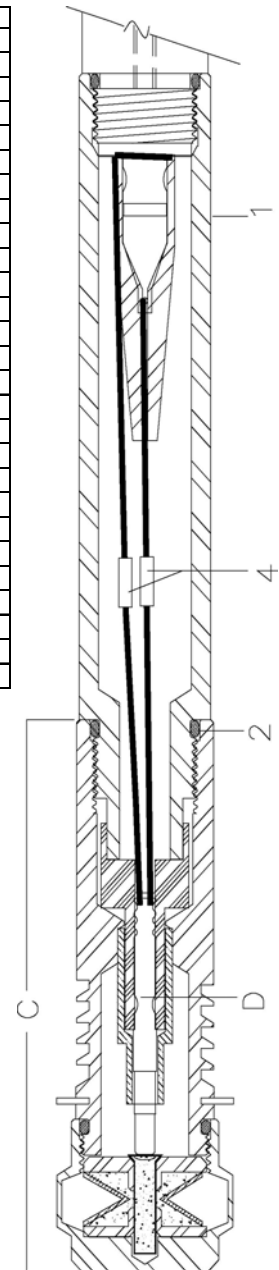
Specifications and Schematics



1.156 in - 1.460 in

Item	Description	Part Number	
		1-5/32"--1.46"	1.56" + up
1	Steel Extension Adapter	CUT-1156-050	CUT-0100-087
	Aluminum Extension Adapter	--	CUT-0100-079
2	O-ring for Adapter	OOO-V569-210	OOO-V569-214
3	Detonator Sleeve	DET-3050-051	--
4	Splice Boot	PUR-0210-001	PUR-0210-001
D	Detonator	DET-3050-009LS	DET-3050-009L
C	1-5/32" GOEX Tubing Cutter	CUT-1156-400	--
	1.230" Tubing Cutter	CUT-1230-402	--
	1.230" GOEX Tubing Cutter	CUT-1230-400	--
	1.390" Tubing Cutter	CUT-1390-402	--
	1.390" GOEX Tubing Cutter	CUT-1390-400	--
	1.460" GOEX Tubing Cutter	CUT-1460-400	--
	1.560" Tubing Cutter	--	CUT-1560-402
	1.560" GOEX Tubing Cutter	--	CUT-1560-400
	1 11/16" Owen Tubing Cutter	--	CUT-1687-402
	1 11/16" GOEX Tubing Cutter	--	CUT-1687-400
	1 3/4" Owen Tubing Cutter	--	CUT-1750-402
	1 3/4" GOEX Tubing Cutter	--	CUT-1750-400
	1 13/16" Owen Tubing Cutter	--	CUT-1812-402
	1 13/16" GOEX Tubing Cutter	--	CUT-1812-400
	2 1/16" Owen Tubing Cutter	--	CUT-2062-402
	2 1/16" GOEX Tubing Cutter	--	CUT-2062-400
	2 1/8" Owen Tubing Cutter	--	CUT-2125-402
	2 1/8" GOEX Tubing Cutter	--	CUT-2125-400
	2 1/4" Owen Tubing Cutter	--	CUT-2250-402
	2 1/4" GOEX Tubing Cutter	--	CUT-2250-400

- Items 1 - 4 and detonator must be ordered separately from the cutter assembly.
- HNS Cutters are available by special order. Owen cutters should be ordered by replacing the 402 with 503; GOEX cutters by replacing the 400 with 500. (for example, CUT-XXXX-503).
- Alternate arming assembly available using JRC style extension adapter with button contacts, CUT-0100-078, and detonator with spring contacts, DET-3050-009E for 1.560 in and larger cutters.



1.560 in - 2.125 in



Tubing Cutters for 1.660 in. - 2.875 in. Tubing

Outer Dia. [in (mm)]	Temp. [°F (°C)]	Pressure [psi (MPa)]	Explosive Weight [lb (kg) (g)]	Recommended Application		Part Number
1.156 (29.4)	400 (204)	15,000 (103.4)	.015 (.007) (7)	1.66"	2.4#	CUT-1156-400
1.230 (31.2)		15,000 (103.4)	.017 (.008) (8)	1.66"	2.4#	CUT-1230-400
1.230 (31.2)		12,000 (82.7)	.031 (.014) (14)	1.66"	2.4#	CUT-1230-402
1.390 (35.3)		15,000 (103.4)	.024 (.011) (11)	1.90"	2.9#	CUT-1390-400
1.390 (35.3)		15,000 (103.4)	.040 (.018) (18)	1.90"	2.9#	CUT-1390-402
1.460 (37.1)		15,000 (103.4)	.046 (.021) (21)	2 1/16"	3.25#	CUT-1460-400
1.560 (39.6)		15,000 (103.4)	.044 (.020) (20)	2 1/16"	3.25#	CUT-1560-400
1.560 (39.6)		15,000 (103.4)	.024 (.011) (11)	2 1/16"	3.25#	CUT-1560-402
1.687 (42.9)		15,000 (103.4)	.029 (.013) (13)	2 3/8"	4.7#	CUT-1687-402
1.687 (42.9)		15,000 (103.4)	.046 (.021) (21)	2 3/8"	4.7#	CUT-1687-400
1.750 (44.5)		15,000 (103.4)	.029 (.013) (13)	2 3/8"	4.7#	CUT-1750-402
1.750 (44.5)		15,000 (103.4)	.043 (.020) (20)	2 3/8"	4.7#	CUT-1750-400
1.812 (46.0)		15,000 (103.4)	.029 (.013) (13)	2 3/8"	4.7#	CUT-1812-402
1.812 (46.0)		15,000 (103.4)	.043 (.020) (20)	2 3/8"	4.7#	CUT-1812-400
2.062 (52.4)		15,000 (103.4)	.050 (.023) (23)	2 7/8"	8.7#	CUT-2062-402
2.062 (52.4)		15,000 (103.4)	.059 (.027) (27)	2 7/8"	6.85#	CUT-2062-400
2.125 (54.0)		15,000 (103.4)	.040 (.018) (18)	2 7/8"	6.5#	CUT-2125-402
2.125 (54.0)		15,000 (103.4)	.059 (.027) (27)	2 7/8"	6.85#	CUT-2125-400
2.250 (57.2)		15,000 (103.4)	.040 (.018) (18)	2 7/8"	6.5#	CUT-2250-402
2.250 (57.2)		15,000 (103.4)	.059 (.027) (27)	2 7/8"	6.85#	CUT-2250-400

1.0 Assembly of Tubing Cutter

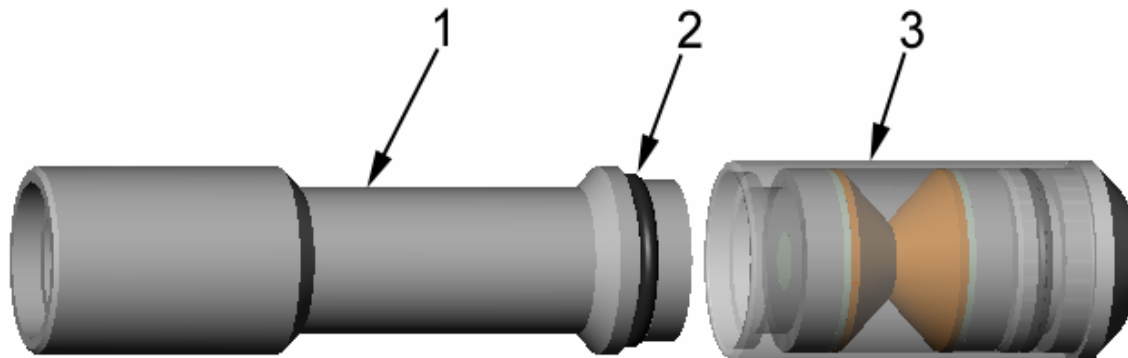


Figure 1: Exploded View, sizes 1.156-in - 1.460-in

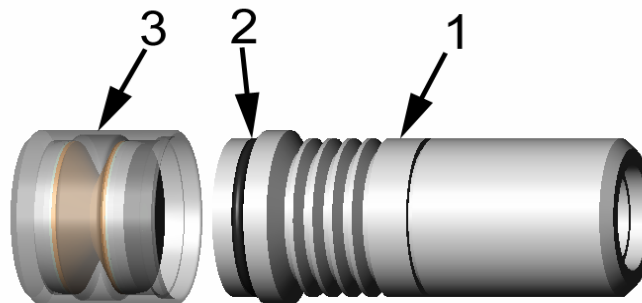



Figure 2: Exploded View, sizes 1.560-in - 2.250-in

 *Note: The Tubing Cutter will normally be shipped assembled, but must be disassembled to install the O-ring and to arm the tool.*

1.1 Visually inspect the O-ring for cuts or cracks and lightly lubricate it with grease.

1.2 Thread the Mandrel (item #1) onto the cutter Cup.

 *Note: The Tubing Cutter Cartridges and Booster are pre-assembled and inside the cutter Cup.*

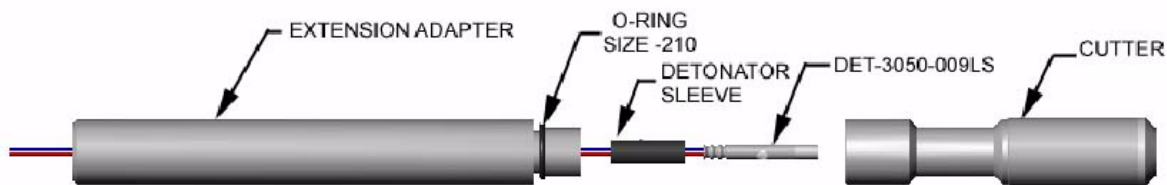
2.0 Arming Method for 1.156-in - 1.460-in Tubing Cutters



Warning: Always follow API RP-67 guidelines when arming electrical detonators!



Warning: Only use DET-3050-009LS!



2.1 Remove the detonator from its package.

2.2 Insert the detonator into a safety shield.

2.3 Measure the resistance of the detonator between the two lead wires with a blaster's multimeter. The detonator should read 51 Ohms \pm 5 Ohms.

2.4 Remove the O-ring from its package and visually inspect it for cuts or cracks. Lightly lubricate the O-ring with grease and install it onto the Extension Adapter.

2.5 Insert the detonator lead wires through the hole in the Extension Adapter.

2.6 Electrically connect the detonator lead wires to the wireline or toolstring.

2.7 Mechanically connect the Top Sub to the wireline toolstring.

2.8 Insure the wireline is shunted through the shooting panel.

2.9 Remove the detonator from the safety shield.

2.10 Insert a rubber sleeve into the cutter Mandrel.

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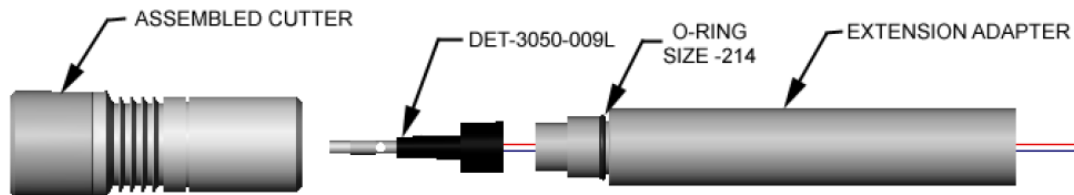
2.11 Insert the detonator into the sleeve in the cutter Mandrel, and thread the cutter onto the Extension Adapter and toolstring.

2.12 The tool is armed and ready to run in hole.

3.0 Arming Method for 1.560 in. - 2.250 in. Tubing Cutters



Warning: Always follow API RP-67 guidelines when arming electrical detonators!



3.1 Remove the detonator from its package.

3.2 Insert the detonator into a safety shield.

3.3 Measure the resistance of the detonator between the two lead wires with a blaster's multimeter. The detonator should read 51 Ohms \pm 5 Ohms.

3.4 Remove the O-ring from package. Inspect it visually for cuts or cracks. Lightly lubricate the O-ring with grease.

3.5 Install the O-ring onto the Extension Adapter.

3.6 Insert the detonator lead wires through the hole in the adapter.

3.7 Electrically connect the detonator lead wires to the wireline or toolstring.

3.8 Mechanically connect the Top Sub to the wireline toolstring.



3.9 Insure the wireline is shunted through the shooting panel.

3.10 Remove the detonator from the safety shield and install the booted portion of the detonator over the end of the Extension Adapter.

3.11 Insert the detonator into the Cutter Mandrel and thread the cutter onto the Extension adapter and toolstring.

3.12 The tool is armed and ready to run in hole.

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