

## INTERNAL PRESSURE PIPE CUTTERS

### Overview

The Logan Internal Pressure Pipe Cutter utilizes pump pressure to actuate three carbide-coated knives to cut single and multiple strings of pipe from 4 inches O.D. to 36-inches O.D. Each different size cutter can be dressed with different lengths of knives to cut different sizes of pipe. Pump pressure is preset by a simple adjustment so the knives will extend at the exact desired diameter. Flow restriction across an orifice feeds

a piston that forces the knives out. When the knives reach a pre-set diameter, the operator will see a sudden pressure drop that indicates that the pipe has been cut.

### Construction

The Logan Internal Pressure Pipe Cutter consists of a body, multiple knives with knife pins and retainer screws, a piston with a pressure relief valve system consisting of a valve stem,

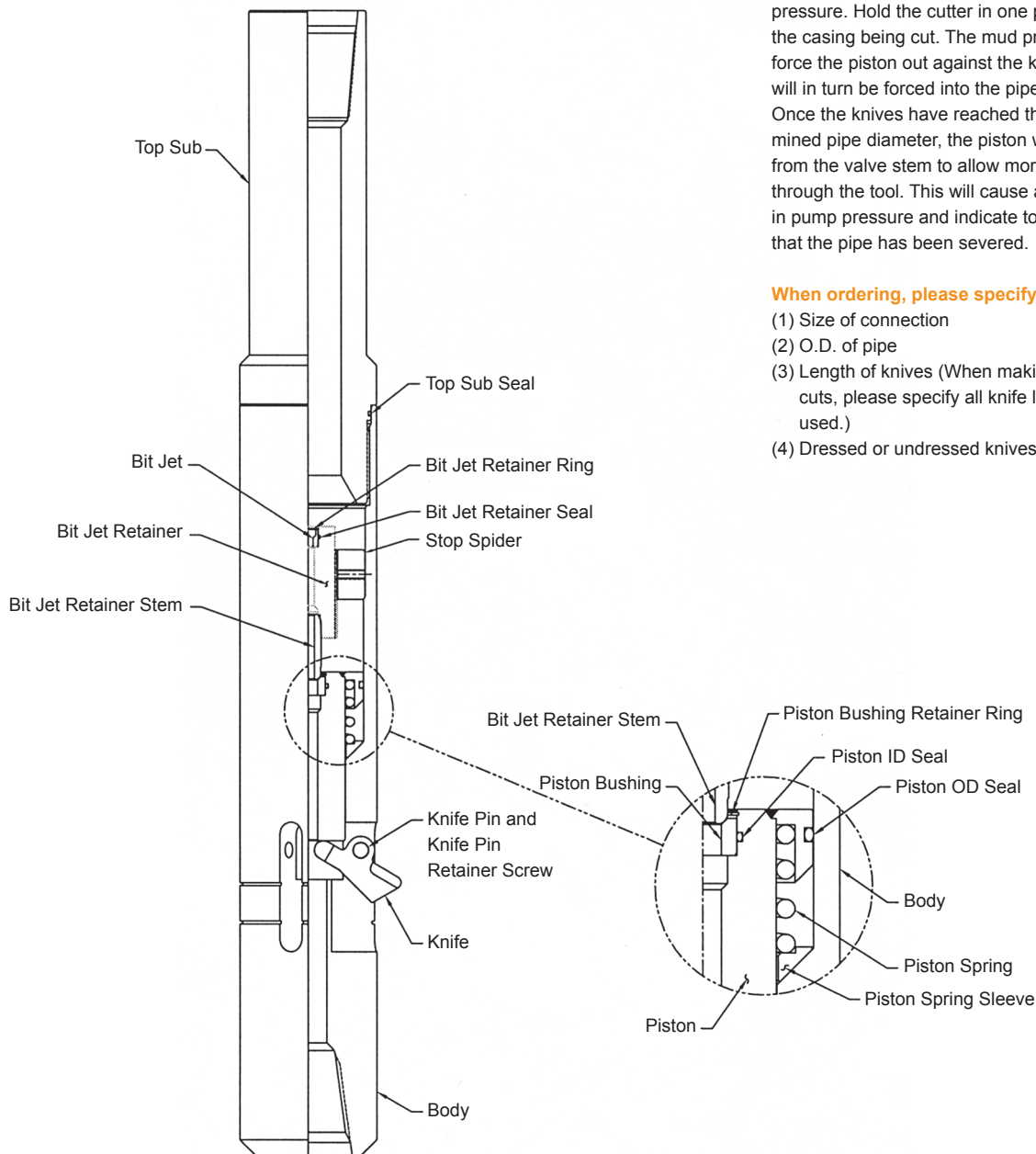
flow bushing, flow bean retainer, stop spider, flow bean, and set screws. All component parts are manufactured from specially selected alloys.

### Operation

The Logan Internal Pressure Pipe Cutter is run on tubing or drill pipe with the knives wired so that they stay in their grooves until the desired cutting depth is reached. Stabilization should be run above the cutter. Begin rotation of the drill string at approximately 35 to 50 rpm. Engage the mud pumps at about 900 psi pump pressure. Hold the cutter in one position inside the casing being cut. The mud pressure will force the piston out against the knives, which will in turn be forced into the pipe being cut. Once the knives have reached the predetermined pipe diameter, the piston will separate from the valve stem to allow more mud to flow through the tool. This will cause a rapid drop in pump pressure and indicate to the operator that the pipe has been severed.

### When ordering, please specify:

- (1) Size of connection
- (2) O.D. of pipe
- (3) Length of knives (When making multiple cuts, please specify all knife lengths to be used.)
- (4) Dressed or undressed knives when ordering



# LOGAN GENERAL CATALOG

OIL TOOLS

## INTERNAL PRESSURE PIPE CUTTERS

<b>PIPE SIZE TO CUT</b>		4	4-1/2 to 6-1/8	6-5/8 to 7-5/8	8-5/8 to 11-3/4	9-5/8 to 36	10-3/4 to 36	13-3/8 to 36
<b>CUTTER O.D.</b>		3-1/4	3-5/8	5-9/16	7-3/8	8-1/4	9-1/2	11-3/4
<b>CONNECTION SIZE (BOX UP)</b>		2-3/8 Reg	2-3/8 IF	3-1/2 IF	Blank	Blank	Blank	Blank
<b>CONNECTION SIZE (BOX DOWN)</b>		2-3/8 Reg	2-3/8 Reg	3-1/2 Reg	Blank	Blank	Blank	Blank
<b>COMPLETE ASSEMBLY</b>	<b>Logan Part No.</b>	<b>412-325</b>	<b>412-363</b>	<b>412-556</b>	<b>412-738</b>	<b>412-825</b>	<b>412-950</b>	<b>412-1175</b>
	Bowen No.	150444	147483	147489	150959	147495	147343	147369
<b>BODY</b>	<b>Logan Part No.</b>	<b>R1000</b>	<b>R1001</b>	<b>R1002</b>	<b>R1003</b>	<b>R1004</b>	<b>R1005</b>	<b>R1006</b>
	Bowen No.	150445	147484	147490	151022	147496	147344	147370
<b>KNIFE (UNDRESSED)</b>	<b>Logan Part No.</b>	<b>R2000</b>	<b>R2001</b>	<b>R2002</b>	<b>R2003</b>	<b>R2004</b>	<b>R2025</b>	<b>R2005</b>
	Bowen No.	150446	80357	80717	151023	147008	...	147357
	No. Req'd	3	3	3	3	3	3	3
<b>KNIFE PIN</b>	<b>Logan Part No.</b>	<b>R3000</b>	<b>R3000</b>	<b>R3002</b>	<b>R3003</b>	<b>R3004</b>	<b>R3004</b>	<b>R3005</b>
	Bowen No.	80359	80359	80719	151024	147009	147009	147371
	No. Req'd	3	3	3	3	3	3	3
<b>KNIFE PIN RETAINER SCREW</b>	<b>Logan Part No.</b>	<b>AK9004</b>	<b>AK9004</b>	<b>R4002</b>	<b>R4003</b>	<b>R4003</b>	<b>R4003</b>	<b>R4004</b>
	Bowen No.	23508	23508	13847	148526	148526	148256	148256
	No. Req'd	3	3	3	3	3	3	3
<b>SPRING SLEEVE</b>	<b>Logan Part No.</b>	...	<b>R5001</b>	<b>R5002</b>	...	<b>R5003</b>	...	...
	Bowen No.	...	147487	147493	...	147499	...	...
<b>SPRING</b>	<b>Logan Part No.</b>	<b>R6000</b>	<b>R6001</b>	<b>R6002</b>	<b>R6003</b>	<b>R6003</b>	<b>R6004</b>	<b>R6004</b>
	Bowen No.	150449	147488	147494	147500	147500	147384	147384
<b>PISTON</b>	<b>Logan Part No.</b>	<b>R7000</b>	<b>R7001</b>	<b>R7002</b>	<b>R7003</b>	<b>R7004</b>	<b>R7005</b>	<b>R7005</b>
	Bowen No.	150450	147485	147491	151025	147497	147373	147373
<b>PISTON O.D. SEAL</b>	<b>Logan Part No.</b>	<b>568-330</b>	<b>568-333</b>	<b>568-346</b>	<b>R8003</b>	<b>R8004</b>	<b>R8005</b>	<b>R8005</b>
	Bowen No.	27-33	27-36	27-49	151026	147012	147374	147374
<b>PISTON I.D. SEAL</b>	<b>Logan Part No.</b>	<b>568-220</b>	<b>568-220</b>	<b>568-220</b>	<b>568-228</b>	<b>568-331</b>	<b>568-331</b>	<b>568-331</b>
	Bowen No.	27-25	27-25	27-25	568228	27-34	27-34	27-34
<b>PISTON BUSHING</b>	<b>Logan Part No.</b>	<b>R10000</b>	<b>R10000</b>	<b>R10000</b>	<b>R10002</b>	<b>R10002</b>	<b>R10002</b>	<b>R10002</b>
	Bowen No.	80356	80356	80356	147013	147013	147013	147013
<b>PISTON BUSHING RETAINER RING</b>	<b>Logan Part No.</b>	<b>R11000</b>	<b>R11000</b>	<b>R11000</b>	<b>R11001</b>	<b>R11001</b>	<b>R11001</b>	<b>R11001</b>
	Bowen No.	21116	21116	21116	147014	147014	147014	147014
<b>BIT JET RETAINER</b>	<b>Logan Part No.</b>	<b>R12000</b>	<b>R12000</b>	<b>R12001</b>	<b>R12002</b>	<b>R12002</b>	<b>R12003</b>	<b>R12003</b>
	Bowen No.	80352	80352	80714	147015	147015	147377	147377

Logan Oil Tools reserves the right to change or discontinue designs without notice.

Special Note:

(1) Optional bullnose nut available upon request.

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CUTTER O.D.	3-1/4	3-5/8	5-9/16	7-3/8	8-1/4	9-1/2	11-3/4
CONNECTION SIZE (BOX UP)	2-3/8 Reg	2-3/8 IF	3-1/2 IF	Blank	Blank	Blank	Blank
CONNECTION SIZE (BOX DOWN)	2-3/8 Reg	2-3/8 Reg	3-1/2 Reg	Blank	Blank	Blank	Blank
<b>COMPLETE ASSEMBLY</b>	<b>Logan Part No.</b> 412-325	412-363	412-556	412-738	412-825	412-950	412-1175
	Bowen No.	150444	147483	147489	150959	147495	147343
<b>BIT JET RETAINER SEAL</b>	<b>Logan Part No.</b> 568-117	568-117	568-117	568-219	568-219	568-219	568-219
	Bowen No.	568117	568117	568117	27-24	27-24	27-24
<b>BIT JET RETAINER STEM</b>	<b>Logan Part No.</b> R16000	R16000	R16000	R16001	R16001	R16001	R16001
	Bowen No.	80354	80354	80354	147017	147017	147017
<b>STOP SPIDER</b>	<b>Logan Part No.</b> R17000	R17001	R17002	R17003	R17004	R17005	R17006
	Bowen No.	150451	80353	80715	151027	145168	147354
<b>STOP SPIDER SET SCREW</b>	<b>Logan Part No.</b> P12008	R18001	R18002	AX10002	AX10002	AX10002	R18004
	Bowen No.	23705	23706	23709	145165	145165	145165
	No. Req'd	3	3	3	3	3	3
<b>BIT JET</b>	<b>Logan Part No.</b> R14000	R14001	R14001	R14002	R14002	R14002	R14002
	Bowen No.	150682	80453	80453	147016	147016	147016
<b>BIT JET RETAINER RING</b>	<b>Logan Part No.</b> R15000	R15000	R15000	R15002	R15002	R15002	R15002
	Bowen No.	54131	54131	54131	33788	33788	33788
<b>TOP SUB</b>	<b>Logan Part No.</b> R19000	R19001	R19002	R19003	R19004	R19005	R19006
	Bowen No.	150452	80351	80713	151028	147018	147356
<b>TOP SUB SEAL</b>	<b>Logan Part No.</b> 568-231	568-234	568-249	568-359	568-438	568-443	568-447
	Bowen No.	30-9	30-12	30-27	568359	27-65	568440
<b>TOP SUB SEAL</b>	<b>Logan Part No.</b> ...	...	...	...	568-437	...	...
	Bowen No.	...	...	...	27-64	...	...

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### CENTRALIZING TOP SUBS

5" O.D.	Logan Part No.	...	R2100	...	...	...	...	...
	Bowen No.	...	80566	...	...	...	...	...
5-1/2" O.D.	Logan Part No.	...	R2101	...	...	...	...	...
	Bowen No.	...	80567	...	...	...	...	...
7" O.D.	Logan Part No.	...	...	R2102	...	...	...	...
	Bowen No.	...	...	80720	...	...	...	...
7-5/8" O.D.	Logan Part No.	...	...	R2103	...	...	...	...
	Bowen No.	...	...	80721	...	...	...	...

### KNIVES (UNDRESSED)

7-5/8" to 9-5/8" O.D.	Logan Part No.	...	...	R2006	...	...	...	...
	Bowen No.	...	...	81896	...	...	...	...
10-3/4" O.D.	Logan Part No.	...	...	...	R2007	R2008	...	...
	Bowen No.	...	...	...	151029	147021	...	...
11-3/4" to 13-3/8" O.D.	Logan Part No.	...	...	...	R2007	...	R2026	...
	Bowen No.	...	...	...	151029	...	...	...
13-3/8" to 16" O.D.	Logan Part No.	...	...	...	...	R2011	R2026	R2010
	Bowen No.	...	...	...	...	147022	...	147358
16" to 18-5/8" O.D.	Logan Part No.	...	...	...	...	...	...	R2012
	Bowen No.	...	...	...	...	...	...	147359
18" to 20" O.D.	Logan Part No.	...	...	...	...	R2015	...	...
	Bowen No.	...	...	...	...	147023	...	...
18-5/8 to 24" O.D.	Logan Part No.	...	...	...	...	...	R2027	R2017
	Bowen No.	...	...	...	...	...	...	147360
24" to 30" O.D.	Logan Part No.	...	...	...	...	R2018	...	...
	Bowen No.	...	...	...	...	147024	...	...
26" to 30" O.D.	Logan Part No.	...	...	...	...	...	R2028	R2020
	Bowen No.	...	...	...	...	...	...	147361
30" to 34" O.D.	Logan Part No.	...	...	...	...	R2021	...	...
	Bowen No.	...	...	...	...	147025	...	...
34" to 36" O.D.	Logan Part No.	...	...	...	...	R2022	R2028	R2024
	Bowen No.	...	...	...	...	147026	147362	147362

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