



**WESTERN  
OILFIELD  
SPECIALTIES CORP.**

**BROWNING  
On-Off Tool**

## **BROWNING ON-OFF-TOOL**

### **Automatic Latch ON and OFF TOOL**

**The original automatic latch on and off tool is again available to you from its inventors. One of the most versatile subsurface pump accessories in the oilfield, this tools applications will save the producer time and money. It's primary use is with pumps with plunger diameter larger than the drift of the tubing string. (The tool should be sized for the pump bore rather than the tubing drift).**

**In the field, the Browning automatic latch on/off tool has been adapted to many other uses, including serving as insurance against stripping jobs caused by sanded up or gypped up pumps. It can also be used to fish rods without unseating the pump, greatly reducing time in getting the well back on production. In bad paraffin wells, this tool will enable you to get off the pump, pull rods, scrape paraffin, then automatically lock back on the pump to get back on production.**

**The Browning automatic latch On/Off Tool can be used easily and efficiently. To latch/lock on, it is necessary only to lower the rods. The tool automatically aligns itself to the locking position and the weight of the rod string automatically locks the tool.**

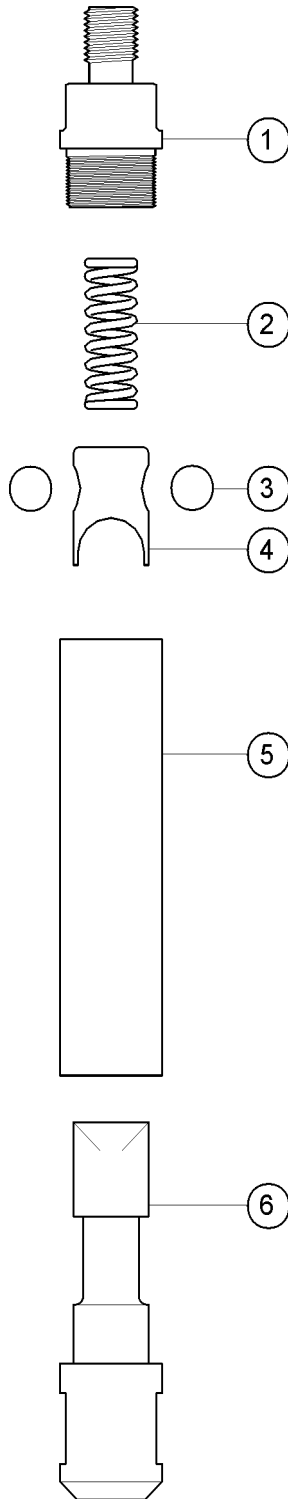
**It is just as quick an operation to get off the tool. Simply set the pump plunger on the bottom of the stroke contacting the standing valve clutch and turn the rods to the RIGHT. (Left hand tools available on special order.)**

**The Browning automatic latch on/off tool is available in either alloy steel, nickle plated alloy or stainless steel and inconel materials.**



## Browning Oil Tools

### On-Off Tools – Model TK



Item	Description	Req'd	Part Number
	<b>Complete Assy TK-90 1.620" OD</b>	1	TK-90
1	Top Bushing –Specify Thread Size	1	TK-91
2	Spring	1	TK-102
3	Guide Balls	2	TK-94
4	Locking Pawl –Specify Left or Right	1	TK-93
5	Body	1	TK-95
6	Bottom Latch –Specify Thread Size	1	TK-96

Item	Description	Req'd	Part Number
	<b>Complete Assy TK-100 1.800" OD</b>	1	TK-100
1	Top Bushing –Specify Thread Size	1	TK-101
2	Spring	1	TK-102
3	Guide Balls	2	TK-104
4	Locking Pawl –Specify Left or Right	1	TK-103
5	Body	1	TK-105
6	Bottom Latch –Specify Thread Size	1	TK-106

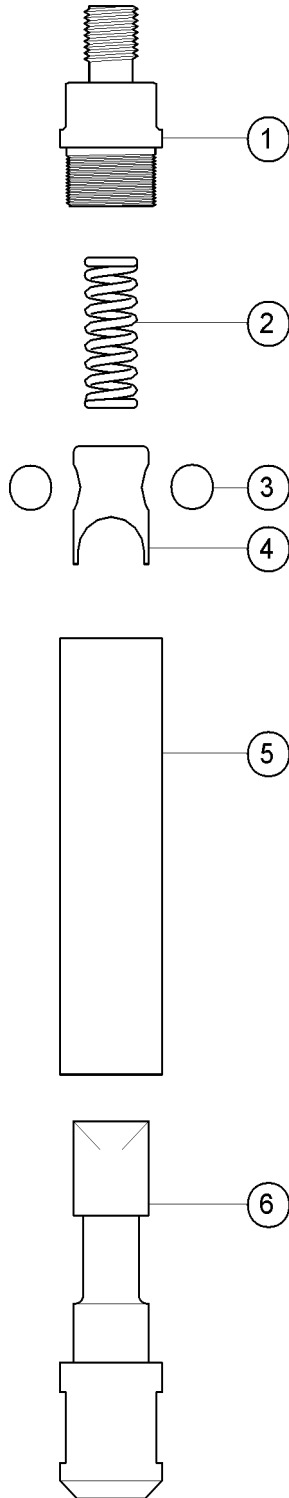
Item	Description	Req'd	Part Number
	<b>Complete Assy TK-110 2.225" OD</b>	1	TK-110
1	Top Bushing –Specify Thread Size	1	TK-111
2	Spring	1	TK-102
3	Guide Balls	2	TK-114
4	Locking Pawl –Specify Left or Right	1	TK-113
5	Body	1	TK-115
6	Bottom Latch –Specify Thread Size	1	TK-116

Item	Description	Req'd	Part Number
	<b>Complete Assy TK-120 2.312" OD</b>	1	TK-120
1	Top Bushing –Specify Thread Size	1	TK-121
2	Spring	1	TK-102
3	Guide Balls	2	TK-124
4	Locking Pawl –Specify Left or Right	1	TK-123
5	Body	1	TK-125
6	Bottom Latch –Specify Thread Size	1	TK-126

Item	Description	Req'd	Part Number
	<b>Complete Assy TK-130 2.740" OD</b>	1	TK-130
1	Top Bushing –Specify Thread Size	1	TK-131
2	Spring	1	TK-132
3	Guide Balls	2	TK-134
4	Locking Pawl –Specify Left or Right	1	TK-133
5	Body	1	TK-135
6	Bottom Latch –Specify Thread Size	1	TK-136

## Browning Oil Tools

### On-Off Tools – Model TM (MAGNUM)



Item	Description	Req'd	Part Number
	Complete Assy TM-100 1.800" OD	1	TM-100
	W/Inconel Latch	1	TMI-100
1	Top Bushing –Specify Thread Size	1	TM-101
2	Spring	1	TM-102
3	Guide Balls	2	TM-104
4	Locking Pawl –Specify Left or Right	1	TK-103
5	Body	1	TM-105
6	Bottom Latch –Specify Thread Size	1	TM-106

Item	Description	Req'd	Part Number
	Complete Assy TM-120 2.312" OD	1	TM-120
	W/Inconel Latch	1	TMI-120
1	Top Bushing –Specify Thread Size	1	TK-121
2	Spring	1	TM-102
3	Guide Balls	2	TM-124
4	Locking Pawl –Specify Left or Right	1	TK-123
5	Body	1	TM-125
6	Bottom Latch –Specify Thread Size	1	TM-126

Item	Description	Req'd	Part Number
	Complete Assy TM-130 2.740" OD	1	TM-130
	Nickel Plated TM-130 w/Inconel Latch	1	NTMI-130
1	Top Bushing –Specify Thread Size	1	TK-131
2	Spring	1	TM-132
3	Guide Balls	2	TM-134
4	Locking Pawl –Specify Left or Right	1	TK-133
5	Body	1	TM-135
6	Bottom Latch –Specify Thread Size	1	TM-136

### On-Off Tools – Model TMX 120 (XH-MAGNUM)

Item	Description	Req'd	Part Number
	Complete Assy TMX-120 2.312" OD	1	TMX-120
	Nickel Plated TMX-120	1	NTMX-120
1	Top Bushing –Specify Thread Size	1	TMX-121
2	Spring	1	TM-102
3	Guide Balls	2	TK-114
4	Locking Pawl –Specify Left or Right	1	TK-113
5	Body	1	TMX-125
6	Bottom Latch –Specify Thread Size	1	TMX-126

**Handy Formulas:**

Produced BFPD = Pump Factor x SPM x Plunger Stroke @100% Efficiency

Bore Factors: 1-1/4" = .182    1-1/2" = .262    1-3/4" = .357    2" = .466  
 2-1/4" = .590    2-1/2" = .728    2-3/4" = .881    3-1/4" = 1.231

Metric Conversions: 1 bbl = 42 US gal = .15899 m<sup>3</sup>    1 m<sup>3</sup> = 6.2897 Barrels  
 1 metre = 3.28 ft    1 ft = .3048 metres  
 1 kilogram = 2.2046 lbs    1 lb = .45359 kilograms  
 1 kPpa = .14503 psi    1 psi = 6.895 kPpa



**Sucker Rod Coupling Data:**

Coupling Size	Rod Size	Box Size	Outside Diameter		Coupling Length
			Full Size	Slim Hole	
5/8"	5/8	15/16"	1-1/2"	1-1/4"	4"
3/4"	3/4"	1-1/16"	1-5/8"	1-1/2"	4"
7/8"	7/8"	1-3/16"	1-13/16"	1-5/8"	4"
1"	1"	1-3/8"	2-3/16"	2"	4"
1-1/8"	1-1/8"	1-9/16"	2-3/8"	2-3/16"	4-1/2"

**Tubing Data:**

Nominal Size	OD	Drift	Capacity Bbl/1000 ft	Maximum Rod Size Std.---Coupling---Slim	
1-1/2"	1.900"	1.516"	2.24	---	5/8
1-3/4"	2-1/16"	1.657"	2.67	5/8	3/4
2"	2-3/8"	1.901"	3.88	3/4	7/8
2-1/2"	2-7/8"	2.347"	5.80	7/8	1
3"	3-1/2"	2.867"	8.78	1-1/8	---

**Sucker Rod Data:**

Rod Size	Dry Wt Pounds/1000'	Area (In <sup>2</sup> )	Pin Size	Max Recommended Load*, lb.			
				API Gr K	C	D	S-88
5/8	1,140	0.307	15/16"	14,700	14,700	20,500	31,900
3/4	1,620	0.442	1-1/16"	21,200	21,200	30,000	45,900
7/8	2,155	0.601	1-3/16"	28,800	28,800	40,800	62,500
1	2,900	0.785	1-3/8"	37,600	37,600	53,300	81,600
1-1/8	3,672	0.994	1-9/16"	47,500	47,500	67,000	100,000

(\* Based on 80% Yield Strength)

**Seating Nipples:**

Tubing Size	Seal Bore +.010"/-.000"		
	Type	Length	Seal Bore
1-1/2"	API -3 Cup	9	1.460"
1-3/4"	API -3 Cup	9	1.535"
2"	API -3 Cup	12	1.780"
2"	API -2 Cup TP	9	1.710"
2-1/2"	API -3 Cup	12	2.280"
2-1/2"	API -2 Cup TP	10	2.210"
3"	API -3 Cup	12	2.780"
3"	API -2 Cup TP	10	2.710"

Note: call for information on - Pacific, Otis, Baker or Camco nipples



**WESTERN OILFIELD SPECIALTIES CORP.**

Western Oilfield Specialties Corp.  
 7108-56 Ave. Edmonton, AB T6B 1E4  
[www.westernoilfieldspecialties.com](http://www.westernoilfieldspecialties.com)

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