

UNIT NO.	KHM SETTING TOOL
DATE	2019-04-05
Revision	1.0

## **KHM Hydraulic Mechanical Setting Tool**

### **Description**

The KHM Hydraulic Mechanical Setting Tool is used for setting Kappa Permanent Bridge Plugs on tubing. Total combination of pressure and tubing tension is utilized to set the Kappa Permanent Bridge Plug. The KHM Hydraulic Mechanical Setting Tool allows communication between casing and tubing before and after the setting operations. If the KHM Setting Tool is converted to run a “one step abandonment” with cement slurry in the tubing, the KHM Setting Tool will only drain and all circulation once dis-engaged from the Kappa Permanent Bridge Plug combination can be run in conjunction with other equipment.

Changing the setting sleeve enables one tool to be used for 114.3 mm to 139.7 mm (4 ½” to 5 ½”) casing and the other tool to be used for 168.28 mm to 339.73 mm (6 5/8” to 13 3/8”). Right hand rotation of the tubing string releases the KHM Setting Tool from the plug.

### **Operation**

While running the KHM Hydraulic Mechanical Setting Tool and Kappa Permanent Bridge Plug combination to setting depth care must be taken not to pre-set the bridge plug while entering the wellbore, running too fast, tagging fluid too hard or stopping abruptly. The tubing will automatically fill as the bridge plug is run in.

Once at setting depth, pressure up to the required pressure (see specification chart next page) to set the bridge plug top slip. In low fluid level wells, the difference in hydrostatic pressure between the tubing and the casing acts as a pressure setting force. With the setting pressure held, apply tension (see specification chart next page) to complete the setting of the bridge plug.

To disengage the setting tool from the bridge plug, apply a constant amount of 500 daN (1125 lbs) and rotate the tubing approximately 10 to 12 turns to the right.

### **Features**

- Simple, reliable operation
- Sets Kappa Permanent Bridge Plug with a combination of hydraulic and mechanically applied force.
- Allows circulation after setting Kappa Permanent Bridge Plug.
- All setting tool components retrieved.
- Can be easily converted to do one step abandonments.



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Technical Data								
Casing				Maximum	Differential	Tension Force		Pressure
O.D.	Weight	Recommended Range		Plug O.D.	Pressure	Required		Rating
		(in/mm)			At Tool*	(lbf, daN)		
in/mm	lb/ft, kg/m	Minimum	Maximum	in/mm	Psi/kPa	Minimum	Maximum	psi/kPa
4 ½	9.50 to 15.10	3.826	4.090	3.562	1,500	28,000	30,000	10,000
114.30	14.14 to 22.47	97.18	103.89	90.47	10,342	12,455	13,345	68,984
5.00	11.50 to 20.80	4.154	4.560	3.937	1,500	28,000	30,000	10,000
127	17.11 to 30.95	105.510	115.82	100	10,342	12,455	13,345	68,948
5 ½	13.00 to 23.00	4.580	5.044	4.235	1,500	28,000	30,000	10,000
139.70	19.35 to 34.23	116.33	128.12	107.57	10,342	12,455	13,345	68,984
5 ¾	14.00 to 25.20	4.890	5.290	4.700	1,500	28,000	30,000	10,000
146.00	20.83 to 37.50	134.34	134.37	119.38	10,342	12,455	13,345	68,984



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O.D.	Weight	Recommended Range		Plug O.D.	Pressure	Required		Rating
		(in/mm)			At Tool*	(lbf, daN)		
in/mm	lb/ft, kg/m	Minimum	Maximum	in/mm	Psi/kPa	Minimum	Maximum	psi/kPa
6 5/8	17.00 to 32.00	5.595	6.135	5.375	1,500	45,000	50,000	10,000
168.30	25.30 to 48.00	142.11	155.83	136.53	10,342	20,017	22,241	68,948
7.00	17.00 to 35.00	6.000	6.538	5.604	1,500	45,000	50,000	10,000
177.80	25.30 to 52.09	152.40	166.070	142.40	10,342	20,017	22,241	68,948
7 5/8	20.0 to 39.0	6.625	7.125	6.312	1,500	45,000	50,000	10,000
193.68	29.80 to 58.00	168.28	180.98	160.32	10,342	20,017	22,241	68,948
8 5/8	24.0 to 49.0	7.310	8.097	7.125	1,500	45,000	50,000	10,000
219.08	35.70 to 72.90	185.67	205.66	180.98	10,342	20,017	22,241	68,948
9 5/8	29.3 to 58.4	8.297	9.063	8.125	1,500	45,000	50,000	8,000
244.48	43.60 to 56.90	210.74	230.20	206.38	10,342	20,017	22,241	55,158
10 3/4	32.7 to 60.70	9.525	10.325	9.440	1,500	45,000	50,000	5,000
273.05	48.70 to 90.30	241.94	262.26	239.78	10,342	20,017	22,241	34,474
11 3/4	38.00 to 60.00	10.641	11.284	10.063	1,500	45,000	50,000	4,000
298.45	56.50 to 89.30	270.28	286.61	255.60	10,342	20,017	22,241	27,579
13 3/8	48.0 to 84.5	12.202	12.879	11.880	1,500	45,000	50,000	3,000
339.70	71.40 to 125.7	309.90	327.13	301.75	10,342	20,017	22,241	20,684