

UNIT NO.	Kappa Bridge Plug
DATE	2019-03-21
Revision	4.0

Kappa WHM Bridge Plug

4-1/2" Through 13-3/8"

Canadian Downhole Inc. premium cast iron bridge plugs are designed to run on electric line (e-line). The Kappa bridge plug rated 2,000-psi to 10,000-psi differential (see specification guide) and 300°F, from above and below.

Features

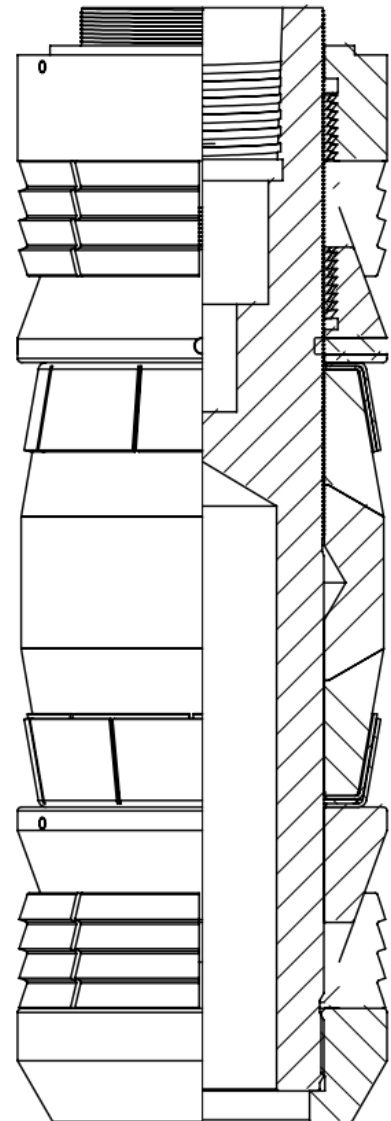
- Field-proven design
- Constructed of drillable materials
- Standard packing element rated at 300°F
- One-piece slips
- Top set with shear stud

Benefits

- Rated to 2,000-psi to 10,000-psi differential, from above and below at 300°F. See Specification guide.
- Runs on existing e-line setting tools
- Sets in P-110 casing
- Higher temperature packing elements available upon request
- No tension mandrel required
- Retaining rings to assist in preventing element extrusion

Applications

- Well abandonment
- Temporary and permanent zonal isolation
- Squeeze cementing
- Fracturing





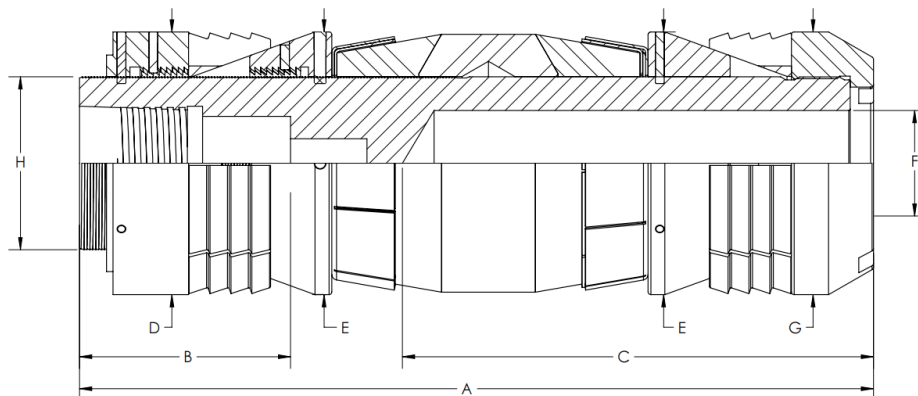
UNIT NO.	Kappa Bridge Plug
DATE	2019-03-21
Revision	4.0

SPECIFICATION GUIDE

CASING				PLUG		
SIZE IN (mm)	WEIGHT LB/FT (kg/m)	MIN. I.D. IN (mm)	MAX. I.D. IN (mm)	PRESSUE RATING PSI (bar)	O.D. IN (mm)	SET FORCE LB (daN)
4-1/2 (114.30)	9.5-15.1 (14.14-22.47)	3.826 (97.18)	4.090 (103.89)	10.000 (689.48)	3.562 (90.47)	33.000 (14.678)
5 (127.00)	11.5-20.8 (17.11-30.95)	4.154 (105.51)	4.560 (115.82)	10.000 (689.48)	3.937 (100.00)	33.000 (14.678)
5-1/2 (139.70)	13.0-23.0 (19.34-34.22)	4.580 (116.33)	5.044 (128.12)	10.000 (689.48)	4.235 (107.57)	33.000 (14.678)
5-3/4 (146.00)	14.0-25.2 (20.83-37.50)	4.890 (134.37)	5.290 (134.37)	10.000 (689.48)	4.700 (119.38)	33.000 (14.678)
6-5/8 (168.30)	17.0-32.0 (25.30-48.00)	5.595 (142.11)	6.135 (155.83)	10.000 (689.48)	5.375 (136.53)	50.000 (22.240)
7 (177.80)	17.0-35.0 (25.30 - 52.08)	6.000 (152.40)	6.538 (166.07)	10.000 (689.48)	5.604 (142.40)	50.000 (22.240)
7-5/8 (193.68)	20.0-39.0 (29.80-58.00)	6.625 (168.28)	7.125 (180.98)	10.000 (689.48)	6.312 (160.32)	50.000 (22.240)
8-5/8 (219.08)	24.0-49.0 (35.70-72.90)	7.310 (185.67)	8.097 (205.66)	10.000 (689.48)	7.125 (180.98)	50.000 (22.240)
9-5/8 (244.48)	29.3-58.4 (43.60-56.90)	8.297 (210.74)	9.063 (230.20)	8.000 (551.58)	8.125 (206.38)	50.000 (22.240)
10-3/4 (273.05)	32.7-60.70 (48.70-90.30)	9.525 (241.94)	10.325 (262.26)	5,000 (344.74)	9.440 (239.78)	50.000 (22.240)
11-3/4 (298.45)	54.0-53.0 (80.4-123.5)	10.641 (270.28)	11.284 (286.61)	4,000 (275.79)	10.063 (255.60)	50.000 (22.240)
13-3/8 (339.70)	48.0-84.5 (71.40-125.7)	12.202 (309.90)	12.879 (327.13)	3,000 (206.84)	11.880 (301.75)	50.000 (22.240)

DIMENSIONAL DATA

PRODUCT NUMBER	DIMENSIONS IN (mm)							
	A	B	C	D	E	F	G	H
450BP10	14.300 (363.22)	5.125 (130.18)	6.560 (166.24)	3.560 (90.42)	3.560 (90.42)	1.500 (38.100)	3.562 (90.47)	2.500 (63.50)
500BP10	14.312 (363.52)	5.125 (130.18)	6.576 (167.03)	3.937 (100.00)	3.937 (100.00)	1.500 (38.10)	3.937 (100.00)	2.500 (63.50)
550BP10	14.800 (375.92)	5.125 (130.18)	7.061 (179.35)	4.230 (107.44)	4.230 (107.44)	1.500 (38.10)	4.235 (107.57)	2.750 (69.85)
575BP10	14.800 (375.92)	5.125 (130.18)	7.061 (179.35)	4.700 (119.38)	4.700 (119.38)	1.500 (38.10)	4.700 (119.38)	2.750 (69.85)
658BP10	16.932 (430.07)	4.500 (114.3)	10.046 (255.17)	5.375 (136.53)	5.375 (136.53)	2.250 (57.15)	5.375 (136.53)	3.688 (93.68)
700BP10	16.932 (430.07)	4.500 (114.3)	10.046 (255.17)	5.604 (142.34)	5.604 (142.34)	2.250 (57.15)	5.604 (142.40)	3.688 (93.68)
758BP10	16.932 (430.07)	4.500 (114.3)	10.046 (255.17)	6.312 (160.33)	6.312 (160.33)	2.250 (57.15)	6.312 (160.33)	3.688 (93.68)
858BP10	22.063 (560.40)	4.500 (114.3)	13.000 (330.20)	7.125 (180.98)	7.125 (180.98)	3.500 (88.90)	7.125 (180.98)	5.250 (133.35)
958BP8	22.063 (560.40)	4.500 (114.3)	13.311 (338.10)	8.125 (206.38)	8.125 (206.38)	4.520 (114.81)	8.125 (206.38)	6.250 (158.75)
1075BP5	22.063 (560.40)	4.500 (114.3)	12.986 (329.84)	9.440 (239.78)	9.440 (239.78)	5.645 (143.38)	9.440 (239.78)	7.375 (187.33)
1175BP4	22.063 (560.40)	4.500 (114.3)	12.970 (329.36)	9.937 (252.40)	9.937 (252.40)	6.500 (165.10)	9.937 (252.40)	8.250 (209.55)
1338BP3	22.063 (560.40)	4.500 (114.3)	12.986 (329.97)	11.870 (301.50)	11.870 (301.50)	6.500 (165.10)	11.880 (301.75)	8.270 (210.06)



UNIT NO.	Kappa Bridge Plug
DATE	2019-03-21
Revision	4.0

MANUFACTURER’S RECOMMENDATIONS

1. Use the bridge plug that conforms to well conditions. such as but not limited to casing size and weight. temperature. pressure and fluid/gas composition.
2. Always follow recommendations of the e-line setting tool manufacturer as to proper cleaning. redressing and operational procedures.
3. Always run a gauge ring and junk basket prior to running bridge plug.
4. Do not over tighten bridge plug onto setting tool. This action could cause upper slip to crack. Snug the bridge plug onto tool by hand. Never use a wrench.
5. Do not allow weight of setting tool to rest on bridge plug after make-up.
6. A bit and scraper should always be run prior to entering wellbore. The well should be circulated clean.
7. Visually check slips for cracks before lowering bridge plug into blowout preventers/wellhead.
8. Hand guide e-line setting tool and bridge plug through blowout preventers/wellhead.
9. Run bridge plug slowly into well. Recommended running speed is 100 ft/min (30 m/min) in “normal” conditions. Heavier fluids may require a slower speed. Always slow down when entering a liner or going through damaged casing.
10. Should the tool misfire at setting depth or the bridge plug is pulled from the wellbore for any reason. do not retrieve at a speed grater then run in speed.
11. Always set bridge plug in casing that has 100% cement bond.
12. Never set a bridge plug in a casing collar or where a packer has previously been set or milling has occurred.
13. When the bridge plug is being set under pressure and is in lubricator. equalize pressure slowly from well into lubricator. If during the process the tool slams into top of the lubricator the jarring action could damage slips. The tool should be removed and inspected for damage.
14. Only set bridge plug in static well conditions. Do not set in well that has fluid or gas movement.
15. A minimum of 10 ft. (3 m) of uncontaminated cement should be placed on top of bridge plug after setting. Lab test should be run on cement to determine set time for the well conditions. The cement and plug should be pressure tested prior to further well work.
16. The plug must be a minimum of 50 ft. (15.2 m) from the bottom shot when perforating or cutting casing. A string shot is included in this category.
17. Tubular weight should never be placed on plug.
18. After setting bridge plug. the setting tool should not be dropped on plug. Gently ease tool to plug.
19. Never hit plug with a dump bailer.
20. Go very slow when approaching and going through fluid level.
21. Always use a slow burn power charge in e-line setting tool.

UNIT NO.	Kappa Bridge Plug
DATE	2019-03-21
Revision	4.0

SETTING EQUIPMENT AND PROCEDURES

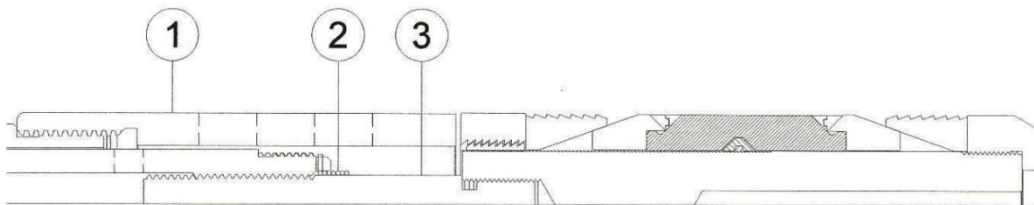
The Kappa bridge plug are designed to be set utilizing a Gearhart, Baker or equivalent e-line setting tool. A wire line adapter kit is required to adapt the appropriate size e-line setting tool to the bridge plug. Please check the setting equipment guide for the proper setting tool requirements.

OPERATION

The Kappa bridge plug is attached to the wire line pressure setting tool with the proper size wire line adapter kit and run to setting depth. When the pressure setting assembly is actuated, the mandrel moves upward in relation to the setting sleeve of the adapter kit thus setting and packing off the bridge plug. The pressure setting tool develops force that is in excess of that required to set the bridge plug and the continued upward movement then breaks the Shear Stud allowing the Pressure setting tool and adapter kit to be retrieved.

ASSEMBLY 4.000" - 5.000"

1. Install setting sleeve (1) on pressure setting tool.
2. Install shear stud in (3) bridge plug.
3. Install lock spring (2) on upper thread of shear stud (3). The lock spring (2) must be used to prevent the bridge plug from backing off of pressure setting assembly during run-in.
4. Install bridge plug on pressure setting tool at shear stud (3). Thread the Bridge Plug to close gap between cap and setting sleeve. Ensure that there is a 1/8" - 3/8" of clearance between setting sleeve (1) and cap. **(CAUTION: DO NOT WRENCH. THIS OPERATION SHOULD BE DONE BY HAND.)**
5. Proceed by running to setting depth and setting as per wire line operating procedures.
6. When pressure setting tool is removed from the well, remove setting sleeve for reuse.

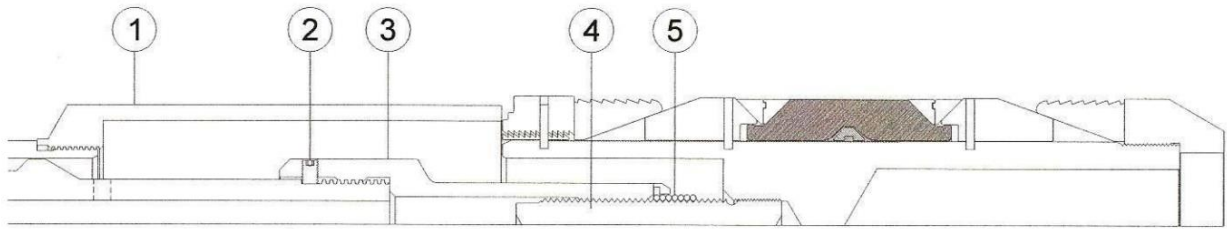


4.000" Bridge Plug shown on Baker 10 Pressure Setting Tool

UNIT NO.	Kappa Bridge Plug
DATE	2019-03-21
Revision	4.0

ASSEMBLY 5-1/2" - 8-5/8"

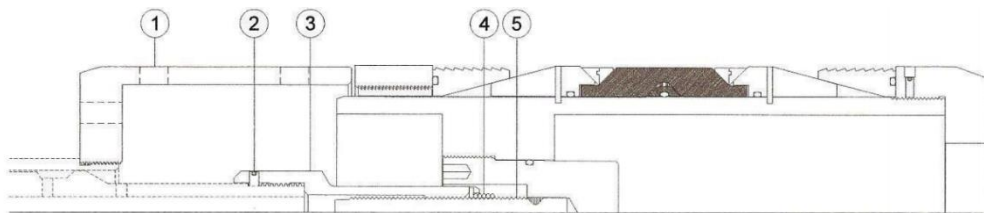
1. Install adjuster sub (3) on pressure setting tool. Install set screw (2) In adjuster sub.
2. Install setting sleeve (1) on pressure setting tool.
3. Install lock spring (5) on upper thread of shear stud (4). The lock spring (5) must be used to prevent the bridge plug from backing off of pressure setting assembly during run-in.
4. Install shear stud (4) in bridge plug.
5. Install bridge plug on pressure setting tool at shear stud (4). Thread the Bridge Plug to close gap between cap and setting sleeve (1). Ensure that there is a 1/8" - 3/8" of clearance between setting sleeve (1) and cap. **(CAUTION: DO NOT WRENCH. THIS OPERATION SHOULD BE DONE BY HAND.)**
6. Proceed by running to setting depth and setting as per wire line operating procedures.
7. When pressure setting tool is removed from the well. remove setting sleeve (1) and adjuster sub (3) for reuse.



7.000" Bridge Plug shown on Baker 20 Pressure Setting Tool

ASSEMBLY 9-5/8" – 13-3/8"

1. Install adjuster sub (3) on pressure setting tool.
2. Install set screw (2) in adjuster sub (3).
3. Install setting sleeve (1) on pressure setting tool.
4. Install lock spring (4) on upper thread of shear stud (5). The lock spring (4) must be used to prevent the bridge plug from backing off of the pressure setting assembly during run-in.
5. Install shear stud (5) in the Bridge Plug.
6. Install bridge plug on pressure setting tool at shear stud (5). Thread the Bridge Plug to close the gap between the cap and setting sleeve (1). Ensure that there is a 1/8" - 3/8" of clearance between the setting sleeve (1) and the cap. **(CAUTION: DO NOT WRENCH. THIS OPERATION SHOULD BE DONE BY HAND.)**
7. Proceed by running to setting depth and setting as per wire line operating procedures.
8. When pressure setting tool is removed from the well. remove setting sleeve (1) and adjuster sub (3) for reuse.



11.750 the Bridge Plug shown on Baker 20 Pressure Setting Tool