



PRODUCTS

The first part of the document discusses the importance of maintaining accurate records in a laboratory setting. It emphasizes the need for clear labeling and consistent data entry to ensure the reliability of experimental results. The author notes that many errors in data collection can be attributed to poor record-keeping practices, such as using ambiguous abbreviations or failing to record environmental conditions.

In the second section, the author describes a series of experiments conducted to test the effect of temperature on reaction rates. The results show a clear positive correlation between temperature and the rate of reaction, which is consistent with the Arrhenius equation. The data points are plotted on a graph, showing a linear relationship between the natural logarithm of the rate constant and the inverse of the absolute temperature.

The third part of the document focuses on the analysis of the experimental data. The author uses linear regression to determine the activation energy of the reaction. The calculated value is compared with literature values to assess the accuracy of the experiment. The author also discusses the sources of experimental error and suggests ways to minimize them in future studies.

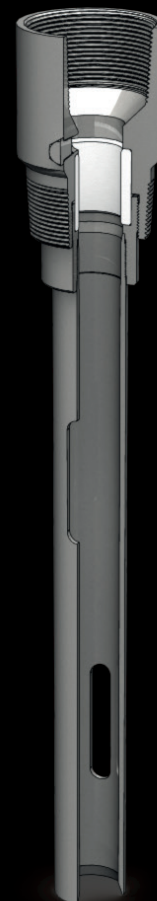
Finally, the author concludes by summarizing the key findings of the study and highlighting the importance of thorough data analysis in scientific research. The document serves as a valuable resource for students and researchers alike, providing a detailed look at the experimental process and the underlying principles of chemical kinetics.

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POLISHED ROD CENTRALIZER

PART NUMBER	OD	ID	BARREL OD	FLOW RATE AREA	UPPER THREAD	NPT THREAD	MATERIAL
PRBBL3012	4.000"	1.25"	1.625"	(2 3/8" TBG) 1.039 (2 7/8" TBG) 2.606 (3 1/2" TBG) 4.952	3" LINE PIPE	1/4" NPT	STEEL
PRBBL3015	4.000"	1.50"	1.875"	(2 3/8" TBG) 0.352 (2 7/8" TBG) 1.492 (3 1/2" TBG) 4.265	3" LINE PIPE	1/4" NPT	STEEL
PRBBL3017	4.000"	1.75"	2.125"	(2 7/8" TBG) 1.133 (3 1/2" TBG) 3.480	3" LINE PIPE	1/4" NPT	STEEL

BLACK GOLD'S POLISHED ROD CENTRALIZER INCREASES THE LIFE OF THE RUBBER PACKING IN THE STUFFING BOX BY CENTRALIZING THE POLISHED ROD IN THE PUMPING TEE. THIS PRODUCT ALSO PREVENTS CATASTROPHIC LEAKS BY CREATING A DRAMATIC PRESSURE DIFFERENTIAL BETWEEN THE FLOW LINE AND STUFFING BOX. THE BOTTOM ASSEMBLY HAS A SLOTTED BARREL COMPONENT TO KEEP THE POLISHED ROD LUBRICATED. A PRESSURE GAUGE IS READILY AVAILABLE FOR INSTALLATION IN THE CENTRALIZER MANDREL. IF A PRESSURE GAUGE IS NOT NEEDED, A STEEL PLUG WILL BE INSTALLED INTO THE ASSEMBLY.



IMPACT

**RESISTANT
CAGE**

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DOUBLE VALVE:

Pump Bore	Tubing Size	PN ¹	OD	Total Length	Thread Top	Thread Bottom
1.25	-	206XX1445	1.231	4.563	1.0000-14	1.0000-14
1.5	1.900	206XX1845	1.481	5.125	1.2500-14	1.2500-14
1.75	2-3/8 x 1-1/4	206XX2145	1.731	5.625	1.4704-14	1.4704-14
2	2-3/8	206XX2445	1.981	5.938	1.5604-14	1.5604-14
2.25	2-7/8	206XX2645	2.231	6.375	1.8024-14	1.8024-14
2.5	-	206XX2745	2.481	7.125	2.1095-11.5	2.1095-11.5
2.75	3-1/2	206XX2945	2.731	7.188	2.1095-11.5	2.1095-11.5

CLOSED BARREL:

Tubing Size	PN ¹	OD	Total Length	Thread Top	Thread Bottom
1.990	204XX1845	1.481	5.75	16	1.2500-14
2-3/8 x 1-1/4	204XX2114	1.731	6.5	16	1.4704-14
2-3/8	204XX2145	1.731	6.5	16	1.4704-14
2-7/8	204XX2645	2.231	7.188	16	1.8024-14
3-1/2	204XX2945	2.731	8.063	16	2.1095-11.5

CLOSED PIN END PLUNGER:

Pump Bore	PN ¹	OD	Total Length	Thread Top	Thread Bottom
1.25	205XX1445	1.231	4.5	1.0000-14	1.0000-14
1.5	205XX1845	1.481	5.125	1.2500-14	1.2500-14
1.75	205XX2145	1.731	5.75	1.4704-14	1.4704-14
2	205XX2445	1.981	6.063	1.5604-14	1.5604-14
2.25	205XX2645	2.231	6.5	1.8024-14	1.8024-14
2.5	205XX2745	2.481	7.188	2.1095-11.5	2.1095-11.5
2.75	205XX2945	2.731	7.313	2.1095-11.5	2.1095-11.5

THE IMPACT RESISTANT CAGE WAS NAMED BECAUSE OF ITS UNPARALLELED RESILIENCE TO BEATING OUT. COMPARED TO HARD LINED CAGES, THE INSERT DEMONSTRATES ELASTICITY AND ABSORBS IMPACT ENERGY, RATHER THAN DEFORMING OR CHIPPING. THIS ELIMINATES SCORING OR STUCK PLUNGERS AS A RESULT OF CHIPPED HARD LINED CAGES. DESIGNED TO PERFORM, THE INSERT FEATURES NO WINDOWS, PREVENTING EROSION/CORROSION TO THE SHELL OF THE CAGE, A COMMON PROBLEM WITH OTHER INSERT CAGES (IG CAGES). PERFORMANCE ALSO INCLUDES RESISTANCE TO CORROSION FROM GASES AND CHEMICALS. THE INSERT IS DESIGNED WITH A "FULL OPEN" GEOMETRY, MAXIMIZING FLOW AREA AND PREVENTING SCALE BUILDUP.



CHEMICAL INJECTION MANDREL

PART NUMBERS	EUE TUBING & SIZE	OD (IN.)	CASING SELECTION
456156300	2-3/8 FULL SIZE	3.875	4-1/2" 11.6# & UP
456156379	2-3/8 SPECIAL CLEARANCE	3.75	4-1/2" 13.5# & UP
456156800	2-7/8 FULL SIZE	4.375	5" 13# & UP
456156879	2-7/8 SPECIAL CLEARANCE	4.25	5" 15# & UP
456157300	3-1/2 FULL SIZE	5.188	6" 20# & UP
456157379	3-1/2 SPECIAL CLEARANCE	5	6" 26# & UP

*CUSTOM SIZES AVAILABLE UPON REQUEST

* ADAPTABLE TO EITHER 3/8" OR 1/4" CAPILLARY TUBE

BLACK GOLD PUMP & SUPPLY, INC.'S CHEMICAL INJECTION MANDREL ALLOWS PRODUCERS TO CONTINUOUSLY OR BATCH TREAT WELLS AT ANY LOCATION IN THE PRODUCTION TUBING STRING. WHILE OTHER METHODS OF INJECTING CHEMICAL REQUIRE PULLING OF THE PUMP AND/OR ROD STRING, THIS MANDREL IS SET WHEN RUNNING THE TUBING IN THE HOLE. ITS LARGE BYPASS AREA PREVENTS SAND FROM BUILDING ON TOP AND GAS SLUGS FROM FORMING BELOW AND ALLOWS TOOLS TO BE RUN PAST THE MANDREL WHEN NEEDED. THE MANDREL FEATURES A LARGE BEVELED BOTTOM ALLOWING THE TUBING TO BE FREELY RUN DOWN HOLE.



**POLISHED
ROD**

**COLLET
BUSHING**

PART NUMBERS	SUCKER ROD PIN	POLISHED ROD BOX	POLISHED ROD	OD	MATERIAL
170155955	1.125"	1.000"	1.500"	2.375"	STEEL
170155954	1.000"	1.000"	1.500"	2.063"	STEEL

*ADDITIONAL SIZES AND NICKEL PLATING AVAILABLE UPON REQUEST

PRODUCT SPECS:

THIS ASSEMBLY COMES IN TWO PARTS
MAX OPERATING LOAD: 60K LBF

AS POLISHED RODS MAY FLEX DUE TO MISALIGNMENT, POLISHED ROD FAILURES MAY OCCUR AT THE BOTTOM THREAD OF THE POLISHED ROD. INSTALLED BETWEEN THE POLISHED ROD AND THE REMAINDER OF THE ROD STRING, BLACK GOLD'S POLISHED ROD COLLET BUSHING ELIMINATES THE RISK OF POLISHED ROD PIN FAILURES. THE POLISHED ROD PIN IS THREADED INTO THE COLLET BODY. THE NUT IS THREADED ONTO THE BODY, WEDGING THE TABS BETWEEN THE NUT AND THE POLISHED ROD. THIS SPECIFIC DESIGN IS TAILORED TO HAVE MAXIMUM HOLDING STRENGTH AS MORE TENSILE FORCES ARE APPLIED TO THE COLLET BUSHING.



ROD ANODE

PART NUMBERS	OD	LENGTH	PIN SIZE
612960702	1.500"	2'	3/4"
612960802	2.250"	2'	7/8"
612961002	2.750"	2'	1"

BLACK GOLD PUMP & SUPPLY, INC.'S ROD ANODE CAN BE ATTACHED IN ANY LOCATION ON THE ROD STRING TO REDUCE CORROSION ON RODS AND TUBING. THE ANODE ACTS AS A FORM OF CATHODIC PROTECTION AGAINST CORROSION TO THE ROD STRING. A GALVANIC RELATIONSHIP IS FORMED BETWEEN THE ANODE AND THE ROD STRING; DRAWING CORROSION AWAY FROM THE ROD STRING AND TOWARDS THE ANODE. BECAUSE OF ITS LARGE DIAMETER, THERE IS AN INCREASE IN VELOCITY AND PRESSURE OF THE FLUID AS IT FLOWS OVER THE ANODE. THIS ALLOWS THE DISSOLVED GASES IN THE FLUID TO "BREAK OUT"; THUS ALLOWING THE DISSOLVED GASES TO CORRODE THE ANODE. THIS PRODUCT IS MADE FROM ZINC ALLOY AND IS USUALLY PLACED ON A 2' PONY SUB.



HYDRAULIC ANCHOR

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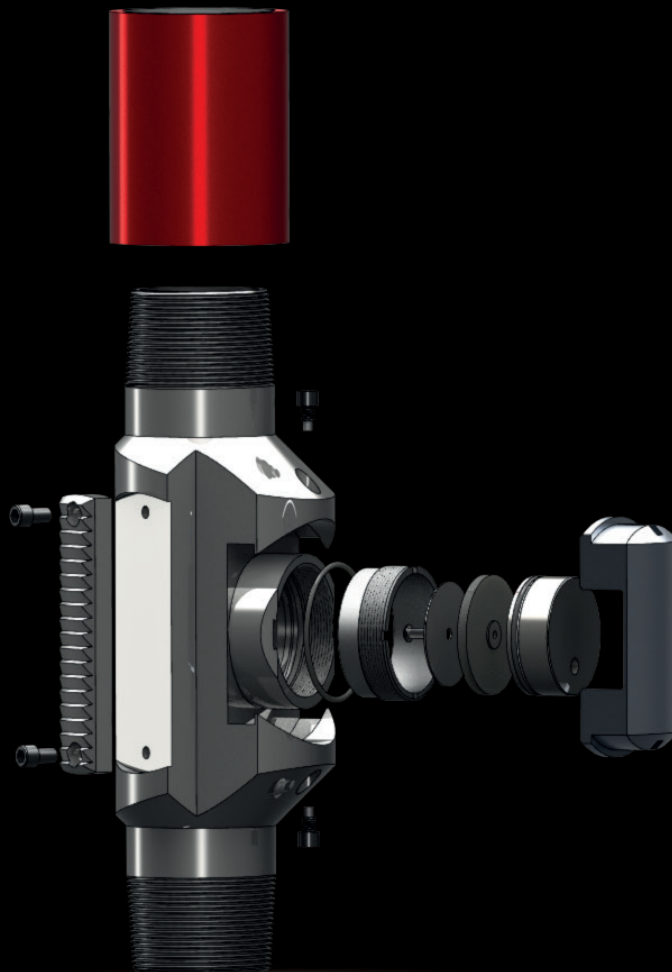
ASSEMBLY #	CONFIGURATION	CASING ID	CASING DRIFT	TOOL OD
01-450-09-20	4.5" 9.5# 20	4.090	3.965	4.009
01-450-10-20	4.5" 10.5# 20	4.052	3.927	3.913
01-450-11-20	4.5" 11.6# 20	4.000	3.875	3.913
01-450-13-20	4.5" 13.5# 20	3.920	3.795	3.828
01-450-15-20	4.5" 15.1# 20	3.826	3.701	3.716
01-500-11-20	5" 11.5# 20	4.560	4.435	4.49
01-500-13-20	5" 13# 20	4.494	4.369	4.393
01-500-15-20	5" 15# 20	4.408	4.283	4.325
01-500-18-20	5" 18# 20	4.276	4.151	4.195
01-550-14-20	5.5" 14# 20	5.012	4.887	4.879
01-550-14-25	5.5" 14# 25	5.012	4.887	4.879
01-550-16-20	5.5" 15.5# 20	4.950	4.825	4.879
01-550-16-25	5.5" 15.5# 25	4.950	4.825	4.879
01-550-17-20	5.5" 17# 20	4.892	4.767	4.784
01-550-17-25	5.5" 17# 25	4.892	4.767	4.784
01-550-20-20	5.5" 20# 20	4.778	4.653	4.683
01-550-20-25	5.5" 20# 25	4.778	4.653	4.683
01-550-23-20	5.5" 23# 20	4.670	4.545	4.589
01-550-23-25	5.5" 23# 25	4.670	4.545	4.589
01-663-20-25	6.625" 20# 25	6.050	5.925	5.776
01-663-20-30	6.625" 20# 30	6.049	5.924	5.869
01-663-24-25	6.625" 24# 25	5.921	5.796	5.776
01-663-24-30	6.625" 24# 30	5.921	5.796	5.776
01-663-28-25	6.625" 28# 25	5.791	5.666	5.684
01-663-28-30	6.625" 28# 30	5.791	5.666	5.684
01-663-32-25	6.625" 32# 25	5.675	5.550	5.611
01-663-32-30	6.625" 32# 30	5.675	5.550	5.611
01-700-17-25	7" 17# 25	6.538	6.413	6.341
01-700-17-30	7" 17# 30	6.538	6.413	6.341
01-700-20-25	7" 20# 25	6.456	6.331	6.246

ASSEMBLY #	CONFIGURATION	CASING ID	CASING DRIFT	TOOL OD
01-700-20-30	7" 20# 30	6.456	6.331	6.341
01-700-23-25	7" 23# 25	6.366	6.241	6.246
01-700-23-30	7" 23# 30	6.366	6.241	6.246
01-700-26-25	7" 26# 25	6.276	6.151	6.095
01-700-26-30	7" 26# 30	6.276	6.151	6.095
01-700-29-25	7" 29# 25	6.184	6.059	5.963
01-700-29-30	7" 29# 30	6.184	6.059	5.963
01-700-32-25	7" 32# 25	6.094	5.969	5.963
01-700-32-30	7" 32# 30	6.094	5.969	5.963
01-700-35-25	7" 35# 25	6.004	5.879	
01-700-35-30	7" 35# 30	6.004	5.879	5.869
01-763-24-25	7.625" 24# 25	7.025	6.900	6.833
01-763-24-30	7.625" 24# 30	7.025	6.900	6.833
01-763-26-25	7.625" 26.4# 25	6.969	6.844	6.833
01-763-26-30	7.625" 26.4# 30	6.969	6.844	6.833
01-763-29-25	7.625" 29.7# 25	6.875	6.750	6.703
01-763-29-30	7.625" 29.7# 30	6.875	6.750	6.703
01-763-33-25	7.625" 33.7# 25	6.765	6.640	6.609
01-763-33-30	7.625" 33.7# 30	6.765	6.640	6.609
01-763-39-25	7.625" 39# 25	6.625	6.500	6.518
01-763-39-30	7.625" 39# 30	6.625	6.500	6.518
01-863-24-30	8.625" 24# 30	8.097	7.972	7.862
01-863-28-30	8.625" 28# 30	8.017	7.892	7.862
01-863-32-30	8.625" 32# 30	7.921	7.796	7.698
01-863-36-30	8.625" 36# 30	7.825	7.700	7.698
01-863-40-30	8.625" 40# 30	7.725	7.600	7.513
01-863-44-30	8.625" 44# 30	7.625	7.500	7.465
01-863-49-30	8.625" 49# 30	7.511	7.386	7.322
01-963-36-30	9.625" 36.0# 30	8.921	8.796	8.663
01-963-40-30	9.625" 40.0# 30	8.835	8.710	8.663
01-963-44-30	9.625" 43.5# 30	8.755	8.630	8.499
01-963-47-30	9.625" 47# 30	8.681	8.556	8.499
01-963-54-30	9.625" 53.5# 30	8.535	8.410	8.315

PRODUCT SPECS:

BLACK OXIDE COATED FOR CORROSION RESISTANCE
CARBURIZED FIXED SLIPS FOR OPTIMAL GRIP TO P-110 CASING AND BELOW
PRIMARY AND SECONDARY FLUID SEALS

BLACK GOLD'S HYDRAULIC ANCHOR IS SIMPLE TO INSTALL AND SIMPLE TO EXTRACT WITH A STRONG HOLDING POWER TO MAXIMIZE PUMP EFFICIENCY. OUR ENGINEERED LARGE BYPASS AREA ELIMINATES GAS PROBLEMS, ELIMINATES SAND BRIDGES, PROVIDES CLEARANCE FOR SURVEY TOOLS, AND ALLOWS CAPILLARY TUBING TO BE BANDED ALONGSIDE. WITH NO SURFACE MANIPULATION NEEDED, THE ANCHOR UTILIZES THE WEIGHT OF THE FLUID COLUMN TO SET. THIS COMPENSATING ANCHOR CAN RESET ITSELF DOWNWARDS BUT WILL NOT MOVE UPWARDS WHEN ACTUATED.



FLOWLINE

**CHECK
VALVE**

PART NUMBERS	LINE PIPE	OD	TOOL LENGTH	THREAD (BOTH ENDS)	MATERIAL
207042400	2"	3.188"	7.2"	2.000-11.5-LP-API	316 S.S.
207193000	3"	4.375"	10.1"	3.000-8-LP-API	NICKEL PLATED

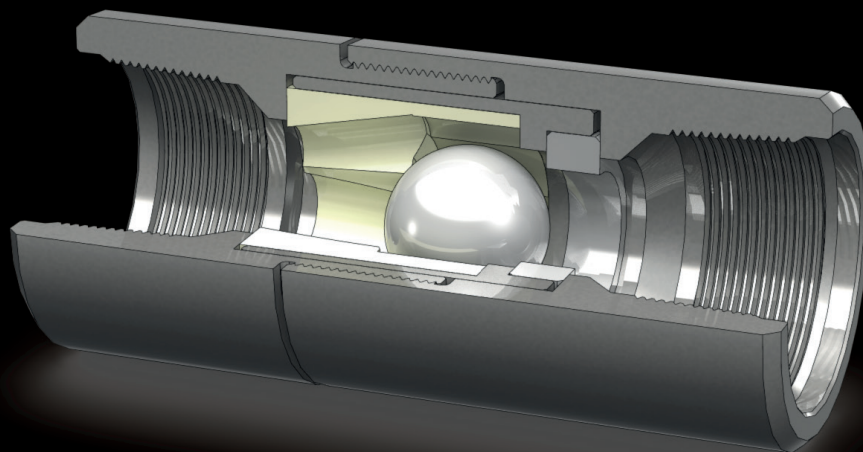
PRODUCT SPECS:

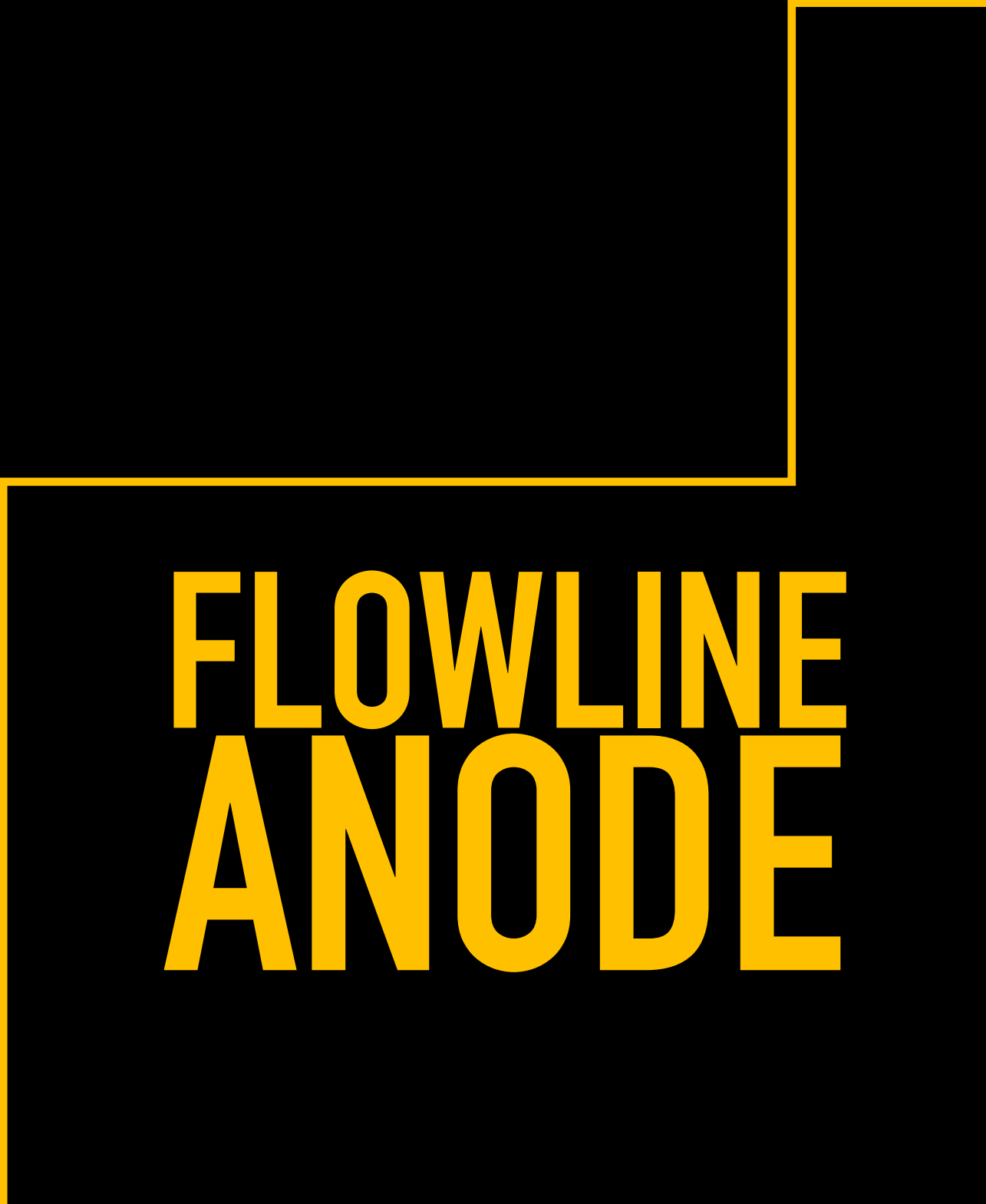
SILICON NITRIDE BALLS
TUNGSTEN CARBIDE SEATS
NYLON INSERT
MAX OPERATING PRESSURE 3,000 PSI

AVAILABILITY:

STEEL INSERT AVAILABLE UPON REQUEST (TEMP. ABOVE 210°F)
STAINLESS STEEL CHECK VALVE AVAILABLE UPON REQUEST

BLACK GOLD'S FLOWLINE CHECK VALVE IS DESIGNED FOR UNI-DIRECTIONAL FLOW. WHEN THE TUBING PRESSURE AT SURFACE BECOMES EQUAL TO OR LESS THAN YOUR FLOWLINE PRESSURE, THE CHECK VALVE WILL CLOSE TO PREVENT ANY FLUID FROM RETURNING DOWNHOLE. THIS CHECK VALVE IS IDEAL FOR HIGH VOLUME FLOW RATES.



A thick yellow L-shaped graphic element is positioned on the left side of the page. It consists of a vertical line on the left, a horizontal line extending to the right from the bottom of the vertical line, and another horizontal line extending to the right from the top of the vertical line, meeting the first horizontal line. This graphic frames the text on the right.

FLOWLINE ANODE

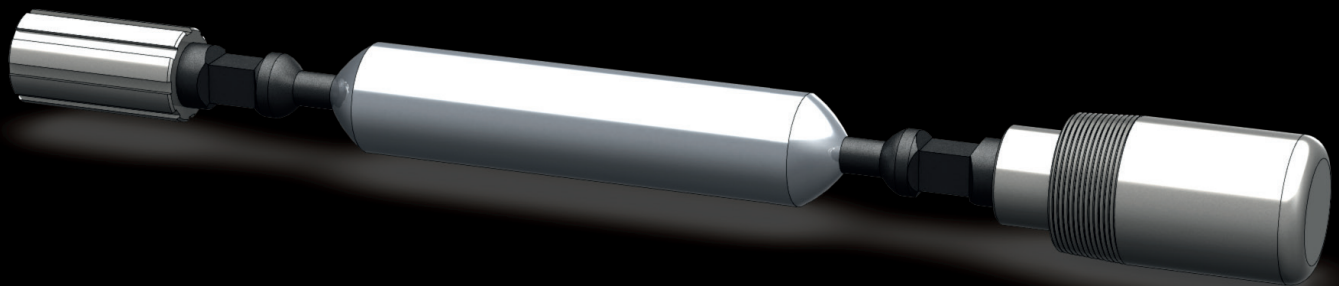
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PART NUMBERS	LINE PIPE	ANODE OD	DIFFUSER OD	PIN THREAD	MATERIAL
619962402	2"	1.500"	1.625"	2.000-11.5-LP-API	ZINC ALLOY
619963002	3"	2.750"	2.375"	3.000-8-LP-API	ZINC ALLOY

PRODUCT SPECS:

INSTALLS DIRECTLY INTO FLOWLINE TEE
 USES SACRIFICIAL ANODE FOR GAS BREAK OUT

THE FLOWLINE ANODE PROVIDES TWO STAGES OF PROTECTION AGAINST CORROSION. THE ANODE ACTS AS A FORM OF CATHODIC PROTECTION AGAINST CORROSION TO THE FLOW LINE. A GALVANIC RELATIONSHIP IS FORMED BETWEEN THE ANODE AND THE FLOW LINE, DRAWING CORROSION AWAY FROM THE FLOW LINE AND TOWARDS THE ANODE. BECAUSE OF ITS LARGE DIAMETER DIFFUSER, THERE IS AN INCREASE IN VELOCITY AND PRESSURE OF THE FLUID AS IT FLOWS OVER THE DIFFUSER. THIS ALLOWS THE DISSOLVED GASSES IN THE FLUID TO "BREAK OUT"; THUS ALLOWING THE DISSOLVED GASSES TO CORRODE THE ANODE.



R- DRAIN

PART NUMBER	TUBING SIZE	OD	ID	UPPER THREAD CONN.	LOWER THREAD CONN.	MATERIAL
1005010	2 3/8"	3.750"	2.000"	2.375-8-API	2.375-8-API	STEEL
1006010	2 7/8"	4.500"	2.441"	2.875-8-API	2.875-8-API	STEEL
1007010	3 1/2"	5.250"	3.000"	3.500-8-API	3.500-8-API	STEEL

PRODUCT SPECS:

SEAL PLUG & INSERT PLUG - BRASS
RIGHT HAND TURN ACTUATION

BLACK GOLD'S R-DRAIN IS USED TO DRAIN FLUID FROM THE TUBING STRING. IT IS INSTALLED IN LINE WITH THE TUBING HAVING A BOX END ON TOP AND PIN END ON BOTTOM. ACTUATION OF THE DRAIN REQUIRES CLOCKWISE ROTATION OF THE TUBING STRING. THE BRASS PLUG PROVIDES SUPERIOR CORROSION RESISTANCE FOR EXTENDED RUN TIMES.







GAS SEPARATOR

AVAILABILITY:

4.5" CASING FOR GREATER FLOW AREA UPON REQUEST
DIP TUBE WITH GAS DIFFUSERS FOR A LOWER CONCENTRATION OF GAS AT THE INTAKE
UPON REQUEST

BLACK GOLD'S GAS SEPARATOR IS INSTALLED AT THE END OF THE TUBING STRING AND IS SPECIFICALLY ENGINEERED TO MAXIMIZE PUMP EFFICIENCY WITH ANY VOLUME OF GAS. WITH A PUMP ABOVE THE PERFORATION, BLACK GOLD'S GAS SEPARATOR BECOMES A CRUCIAL SOLUTION. EACH SEPARATOR IS DESIGNED BASED ON INDIVIDUAL WELL CONDITIONS AND PRODUCTION PARAMETERS TO ALLOW MAXIMUM PRODUCTION.



SUCKER ROD

PART NUMBERS	OD	LENGTH	PIN SIZE	GRADE
616680730	0.750"	30'	3/4"	D
616680830	0.875"	30'	7/8"	D
616680930	1.000"	30'	1"	D
616690730	0.750"	30'	3/4"	HS
616690830	0.875"	30'	7/8"	HS
616690930	1.000"	30'	1"	HS
616691230	1.125"	30'	1-1/8"	HS

BLACK GOLD PUMP & SUPPLY, INC. DISTRIBUTES SUCKER RODS WITH MATERIAL RANGING FROM MEDIUM STRENGTH (GRADE D) TO HIGH STRENGTH (GRADE HS). WE OFFER A FULL RANGE OF API SUCKER RODS IN ALL GRADES.

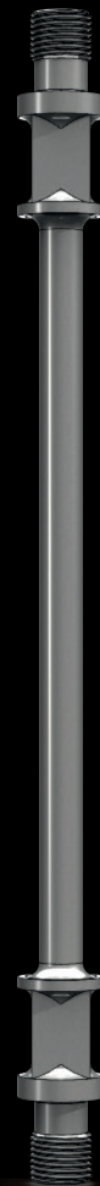


PONY ROD

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PART NUMBERS	OD	LENGTH	PIN SIZE	GRADE
612560702	0.750"	2'	3/4"	D
612560704	0.750"	4'	3/4"	D
612560706	0.750"	6'	3/4"	D
612560708	0.750"	8'	3/4"	D
612560802	0.875"	2'	7/8"	D
612560804	0.875"	4'	7/8"	D
612560806	0.875"	6'	7/8"	D
612560808	0.875"	8'	7/8"	D
612561002	1.000"	2'	1"	D
612561004	1.000"	4'	1"	D
612561006	1.000"	6'	1"	D
612561008	1.000"	8'	1"	D
612590702	0.750"	2'	3/4"	HS
612590704	0.750"	4'	3/4"	HS
612590706	0.750"	6'	3/4"	HS
612590708	0.750"	8'	3/4"	HS
612590802	0.875"	2'	7/8"	HS
612590804	0.875"	4'	7/8"	HS
612590806	0.875"	6'	7/8"	HS
612590808	0.875"	8'	7/8"	HS
612591002	1.000"	2'	1"	HS
612591004	1.000"	4'	1"	HS
612591006	1.000"	6'	1"	HS
612591008	1.000"	8'	1"	HS
612591202	1.125"	2'	1-1/8"	HS
612591204	1.125"	4'	1-1/8"	HS
612591206	1.125"	6'	1-1/8"	HS
612591208	1.125"	8'	1-1/8"	HS

BLACK GOLD PUMP & SUPPLY, INC. DISTRIBUTES PONY RODS WITH MATERIAL RANGING FROM STANDARD STRENGTH (GRADE D) TO HIGH STRENGTH (GRADE HS). WE OFFER A FULL RANGE OF API SUCKER RODS IN ALL GRADES.



SINKER

BAR

PART NUMBERS	OD	PIN SIZE	WEIGHT (LBS/FT)	MIN SIZE TUBING
6180118XX	1.500"	3/4"	6.008	2-3/8"
6180119XX	1.625"	7/8"	7.051	2-7/8"

* XX SIGNIFIES LENGTH IN FEET

BLACK GOLD PUMP & SUPPLY, INC. MANUFACTURES HIGH QUALITY SINKER BARS. OUR SINKER BARS ADD ADDITIONAL WEIGHT TO THE END OF YOUR ROD STRING WHICH WILL KEEP YOUR RODS IN TENSION AND MINIMIZE COMPRESSION. GRADES OF MATERIAL ARE IN ACCORDANCE WITH API SPECIFICATION 11B.

OTHER SIZES AVAILABLE UPON REQUEST:

- 1-1/4" (4.172 LBS/FT)
- 1-3/8" (5.049 LBS/FT)
- 1-3/4" (8.178 LBS/FT)
- 2" (10.68 LBS/FT)

GRADES AVAILABLE:

- GRADE 1/GRADE C - CARBON STEEL, 90 KSI MIN.
- GRADE 2/GRADE K - ALLOY STEEL, 90 KSI MIN.
- GRADE 3/GRADE D - ALLOY STEEL, 115 KSI MIN.



STABILIZER ROD

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PART NUMBERS	ROD SIZE	TUBING SIZE	NOMINAL GUIDE OD	S/R PIN THREAD	GRADE	LENGTH
330530827	1"	2-7/8"	2.375"	7/8"	D	4'
330580724	7/8"	2-3/8"	1.875"	3/4"	D	4'
330580830	1"	3-1/2"	2.875"	7/8"	D	4'

RECOMMENDED FOR DEVIATED WELLS, STABILIZER BARS CAN BE INSTALLED ANYWHERE IN THE ROD STRING TO INCREASE YOUR ROD AND TUBING STRING RUN TIMES. THIS IS HIGHLY RECOMMENDED TO ALSO BE INSTALLED ABOVE THE PUMP. THIS WILL MAXIMIZE THE PUMP EFFICIENCY WHILE MINIMIZING UNEVEN PLUNGER WEAR BY CENTRALIZING YOUR PLUNGER. STABILIZER BARS COME WITH 3 GUIDES, MADE WITH AMODEL POLYPHTHALAMIDE (PPA), WITH AN OPERATING MELTING POINT OF 200°F. HIGH STRENGTH GRADE IS AVAILABLE UPON REQUEST.



POLISHED ROD

PART NUMBERS	OD	LENGTH	PIN SIZE	MATERIAL
SPRAY METAL				
611171426	1.250"	26'	7/8"	1045 CF
611171430	1.250"	30'	7/8"	1045 CF
611171826	1.500"	26'	1"	1045 CF
611171830	1.500"	30'	1"	1045 CF
611171836	1.500"	36'	1"	1045 CF
ALLOY STEEL				
611151222	1.125"	22'	3/4"	4140 STEEL
611151226	1.125"	26'	3/4"	4140 STEEL
611151230	1.125"	30'	3/4"	4140 STEEL
611151422	1.250"	22'	7/8"	4140 STEEL
611151426	1.250"	26'	7/8"	4140 STEEL
611151430	1.250"	30'	7/8"	4140 STEEL
611151436	1.250"	36'	7/8"	4140 STEEL
611151822	1.500"	22'	1"	4140 STEEL
611151826	1.500"	26'	1"	4140 STEEL
611151830	1.500"	30'	1"	4140 STEEL
611151836	1.500"	36'	1"	4140 STEEL

BLACK GOLD PUMP & SUPPLY, INC. DISTRIBUTES POLISHED RODS IN A WIDE VARIETY OF STRENGTHS AND SIZES TO YOUR SPECIFICATIONS. OUR POLISHED RODS CAN BE USED IN APPLICATIONS CONTAINING CORROSION, ABRASION, LIGHT LOADS, OR HEAVY LOADS.

SPRAY METAL – 1045 CARBON STEEL. THESE ARE RECOMMENDED FOR MEDIUM TO HEAVY LOADS WITH HIGHLY ABRASIVE AND/OR CORROSIVE CONDITIONS.

4140 ALLOY STEEL – MEDIUM TO HEAVY LOADS WITH MILD CORROSIVE CONDITIONS.



SAND BAILER

BLACK GOLD HAS ENGINEERED AN EFFICIENT SOLUTION FOR WELLS WHERE SAND HAS ACCUMULATED IN THE LINER. BELOW THE SAND BAILER, JOINTS OF TUBING ARE ATTACHED WITH A FLAPPER VALVE WHERE SAND, SCALE, OR TRASH CAN BE COLLECTED. THE SLOTTED JOINT ABOVE THE SAND BAILER ALLOWS A CONTINUOUS CIRCULATION OF FLUID TO MAXIMIZE THE AMOUNT OF SAND COLLECTED INSIDE THE LOWER TUBING JOINTS. AFTER THE JOB IS COMPLETED, THE TUBING JOINTS CAN BE PULLED OUT OF HOLE AND THE SAND CAN BE BROUGHT TO SURFACE. SAND BAILERS ARE AVAILABLE FOR ALL API TUBING SIZES (2 3/8", 2 7/8", & 3 1/2").





**ESP
NO-GO
CENTRALIZER**

INSTALLED AT THE END OF THE ESP MOTOR, BLACK GOLD PUMP & SUPPLY'S ESP NO-GO CENTRALIZER ENSURES THAT THE ESP MOTOR DOES NOT COME IN CONTACT WITH THE CASING. THIS ALLOWS A HIGHER RATE OF FLUID AROUND THE MOTOR; REDUCING MOTOR TEMPERATURE. WITH PROPERLY DIMENSIONED GUIDES, THIS CENTRALIZER IS ENGINEERED TO OUR CLIENT-SPECIFIC TUBING AND CASING SIZE.

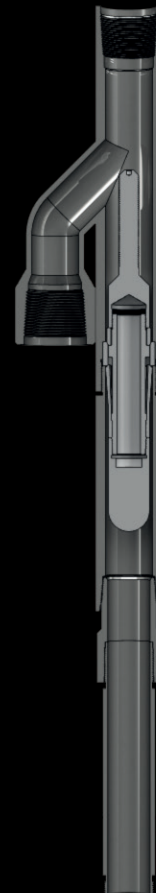


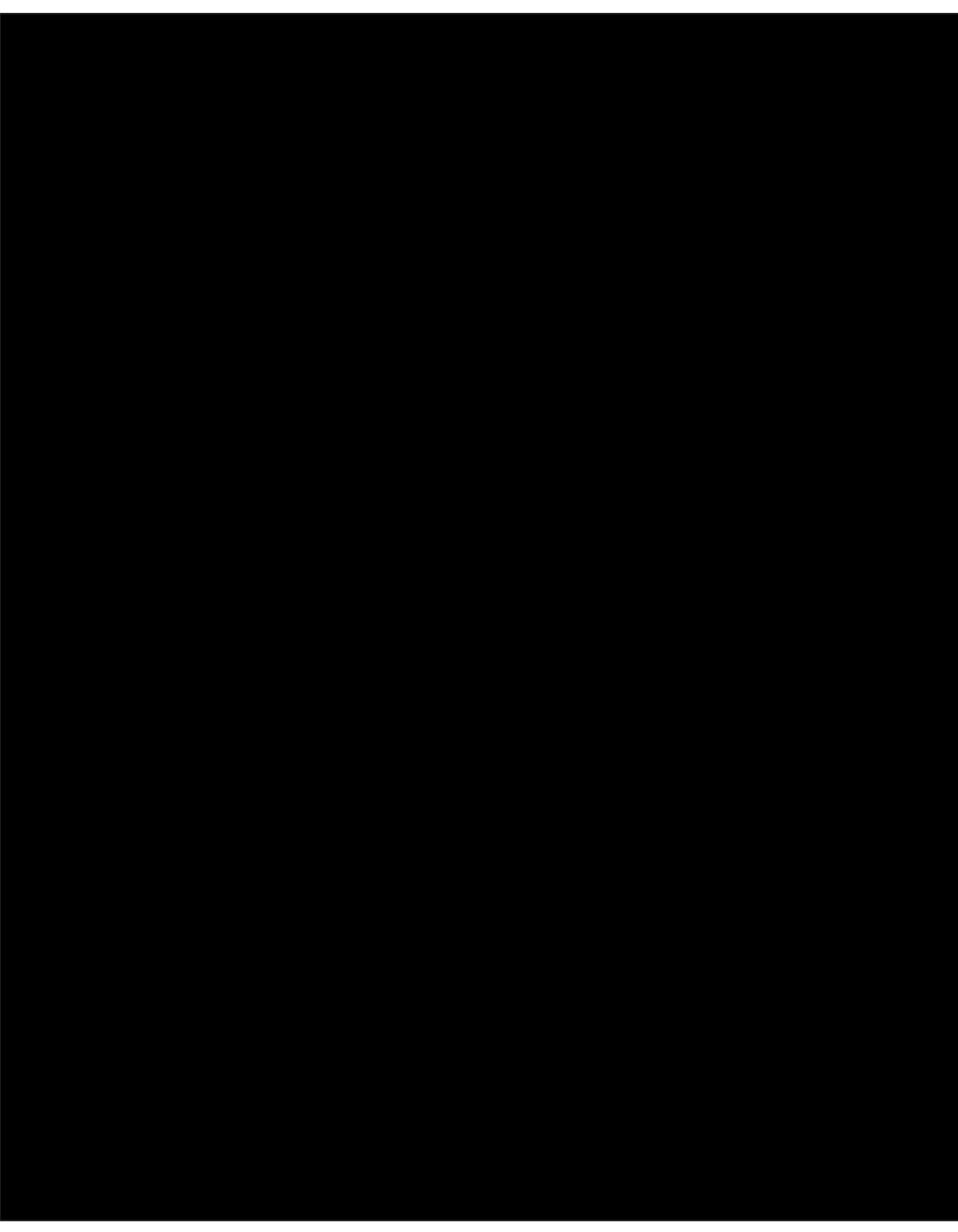
H- TOOL

INSTRUMENT TUBE ADAPTER	INSTRUMENT TUBE ID	CASING	PUMP/MOTOR SIZE	MATERIAL
1 1/2"	1 1/8"	7" 26#	3 3/4"	STEEL
2"	1 1/2"	7" 23#	3 3/4"	STEEL
2 1/4"	1 13/16"	7 5/8" 26#	4 1/2"	STEEL

***ADDITIONAL SIZES AVAILABLE UPON REQUEST**

BLACK GOLD'S H-TOOL ALLOWS OUR CLIENTS TO RUN SURVEY TOOLS WITHOUT THE NEED TO RETRACT THEIR ESP. THE ESP IS INSTALLED ON THE OFFSET OF THE TOOL WHILE A BLANKING PLUG IS INSTALLED CONCENTRIC WITH THE TUBING STRING. THE BLANKING PLUG USES A COMPRESSION SPRING WITH A SET OF SEATING RINGS TO EFFECTIVELY SEAL THE TUBING STRING SO PRODUCTION WILL NOT BE JEOPARDIZED. USING A FISHING TOOL, THE BLANKING PLUG MAY BE RETRACTED TO SURFACE AND A SURVEY TOOL MAY BE RUN DOWN PAST THE H-TOOL. AFTER THE JOB IS FINISHED, THE SURVEY TOOL CAN BE RETRACTED AND THE BLANKING PLUG CAN BE RAN DOWNHOLE TO CONTINUE PRODUCTION.





CHEMICAL SCREENS
CONE PACKING
FIKE DRAINS
FLANGES
HILTAP DRAINS
HYDRAULIC ANCHOR REBUILD KITS
NO TAP TOOLS
POLISHED ROD CLAMPS
ROD ROTATORS
SAND FILTERS
SHEAR COUPLINGS
SPIRAL ROD GUIDES
STUFFING BOXES
TUBING SWIVELS

...AND MORE!

FOR MORE PRODUCTS AND INFORMATION:

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(562) 595-4475
WWW.BLACKGOLDPUMP.COM



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