

# Hydril Pressure Control GK™

## Annular Blowout Preventer

For lower maintenance and more uptime in surface applications

### Product description

Our GK annular blowout preventer's field-tested and proven design has provided world-class dependability and quality in surface applications.

The GK provides quick, positive closing action with simplified controls to keep drilling fluids in the hole if a blowout threatens. The packing unit permits closure on drill pipe, kelly, tool joints or tubing, and wireline as well as the open hole.

- Multiple choices of packing unit rubber compounds allow for flexibility in application for use in water/oil-based muds and sour applications
- Meets NACE MR 01 75 material standards for resistance to sulfide stress cracking
- Wellbore pressure assists in maintaining a closed position
- During operation, drill pipe can be rotated and tool joints stripped through a closed packing unit, while maintaining a full seal on the pipe

### Benefits

The packing unit for the GK annular BOP can hold full-rated working pressure and will close on an open hole. Before shipment, each packing unit is factory tested in a BOP – to 50% of working pressure on open hole and 100% on pipe. The GK provides longer life when using genuine Hydril Pressure Control packing units, as shown in repeated testing.

As the GK closes, the piston moves up, driving the elastomer and inserts inward where they quickly reach a fixed position and form a steel ring that prevents the rubber from moving upward under wellbore pressure. After the ring is formed, feedable elastomer continues to flow inward around the inserts to create a positive seal on the drill string or open hole. Because the elastomer is primarily in compression, it resists tears, cuts and abrasions.

### Key features

The GK simplifies maintenance and lengthens the time between packing unit changes and shop repairs. The key to these benefits is a simple design that includes:

- A single packing unit that closes on any size pipe or open hole—and handles stripping
- Only two moving parts: the piston and packing unit, for less wear and maintenance
- An optional latched head for fast, easy access to the packing unit and wear seals: the majority of GK annulars have a screwed head design
- Field-replaceable, bolted-in inner sleeve
- A replaceable wear plate that eliminates metal-to-metal contact between the packing unit inserts and the BOP head—extending time between major overhaul and repair
- A long piston design for complete balance and more reliable operation as well as ease of assembly
- Engineered elastomer compounds that are carefully developed, designed, manufactured and tested by in-house chemists
- Multiple sizes that are API 16A, 4th Edition conformant



## Technical specifications

Product		GK 7-3	GK 7-5	GK 7-10	GK 7-15	GK 7-20	GK 9-3	GK 9-5	GK 9-10	GK 11-3	GK 11-5		
Bore (inches)		7.0625	7.0625	7.0625	7.0625	7.0625	9.00	9.00	9.00	11.00	11.00		
Working pressure (psi)		3,000	5,000	10,000	15,000	20,000	3,000	5,000	10,000	3,000	5,000		
Head type		Screwed	Screwed	Screwed	Screwed	Screwed	Screwed	Screwed	Screwed	Screwed	Screwed		
Hydraulic operating pressure (psi)		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500		
Gal. to close (U.S. gal.)		2.85	3.86	9.42	11.2	10.9	4.33	6.84	15.9	7.43	9.81		
Gal. to open (U.S. gal.)		2.24	3.3	7.08	7.5	7.2	3.41	5.8	11.95	5.54	7.98		
Stud to flange height (inches)	Flanged bottom	Rated	32.00	36.88	48.13	54.13	59.00	37.88	41.75	55.75	39.75	47.81	
		5 m	–	36.88	–	–	–	–	–	41.75	–	–	47.81
		10 m	–	–	48.13	–	–	–	–	–	55.75	–	48.56
		15 m	–	–	48.75	54.13	–	–	–	–	–	–	–
Stud to flange weight (lbs)	Flanged bottom	Rated	2,715	4,000	12,200	14,250	23,000	3,500	6,000	18,540	5,500	8,200	
		5 m	–	4,000	–	–	–	–	–	6,000	–	–	8,200
		10 m	–	–	12,200	–	–	–	–	–	18,540	–	–
		15 m	–	–	–	14,250	–	–	–	–	–	–	–
Clearance diameter (inches)		32.25	35.75	49.50	61.00	58.00	34.50	41.00	56.75	40.00	44.25		
H <sub>2</sub> S rating (%)		5%	5%	5%	5%	5%	5%	5%	5%	5%	5%		
Material		NBR	NBR	NBR	NBR	NBR	NBR	NBR	NBR	NBR	NBR		
Non-metallic Temperature (°F)	Extreme Low	40	20	30	40	40	40	40	40	40	10		
	Continuous Hot	–	–	–	–	–	–	–	–	–	–		
	Extreme Hot	180	250	350	180	180	180	180	180	180	210		
API 16A conformance status		3 <sup>rd</sup>	4 <sup>th</sup> PR1	4 <sup>th</sup> PR1	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>		

Product		GK 11-5	GK 11-10		GK 13-3		GK 13-5		GK 13-10	GK 16-5		
Bore (inches)		11.00	11.00	11.00	13.625	13.625	13.625	13.625	13.625	16.75	16.75	
Working pressure (psi)		5,000	10,000	10,000	3,000	3,000	5,000	5,000	10,000	5,000	5,000	
Head type		Latched	Screwed	Latched	Screwed	Latched	Screwed	Latched	Latched	Screwed	Screwed	
Hydraulic operating pressure (psi)		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	
Gal. to close (U.S. gal.)		9.81	25.1	25.1	11.36	11.36	17.98	17.98	37.18	28.7	28.7	
Gal. to open (U.S. gal.)		7.98	18.97	18.97	8.94	8.94	14.16	14.16	12.59	19.93	19.93	
Stud to flange height (inches)	Flanged bottom	Rated	48.25	63.50	63.38	45.25	45.25	54.13	54.50	71.31	61.25	61.30
		5 m	48.25	–	–	–	–	54.13	54.50	–	61.25	61.30
		10 m	49.00	63.50	63.38	–	–	56.18	59.44	71.31	–	–
		15 m	–	65.81	–	–	–	–	–	–	–	–
Stud to flange weight (lbs)	Flanged bottom	Rated	–	26,140	–	8,784	–	13,800	13,250	–	20,835	21,230
		5 m	–	–	–	–	–	13,800	13,250	–	20,835	21,230
		10 m	–	26,140	–	–	–	14,500	13,900	–	–	–
		15 m	–	–	–	–	–	–	–	–	–	–
Clearance diameter (inches)		44.25	61.50	60.75	47.50	47.50	52.25	52.25	68.13	59.50	59.50	
H <sub>2</sub> S Rating (%)		5%	5%		5%		HNBR: 10% NBR: 5%		5%	5%		
Material		NBR	NBR	NBR	NBR	NBR	HNBR or NBR		NBR	NBR	NBR	
Non-metallic Temperature ratings (°F)	Extreme Low	10	40		20		20		40	40		
	Continuous Hot	–	–		–		150		–	–		
	Extreme Hot	180	250		350		250		180	180		
API 16A conformance status		3 <sup>rd</sup>	3 <sup>rd</sup>		4 <sup>th</sup> PR1		HNBR: 4 <sup>th</sup> PR2 NBR: 4 <sup>th</sup> PR1		3 <sup>rd</sup>	3 <sup>rd</sup>		

Data is subject to confirmation by the manufacturer.

