



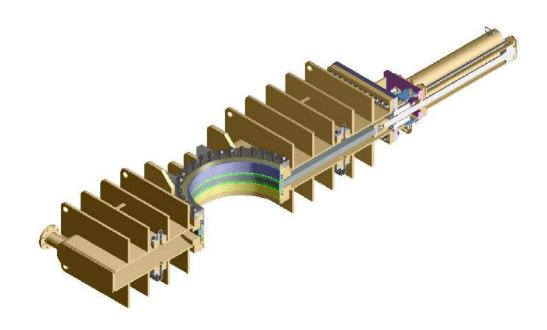
DELTAVALVE IS A DIVISION OF CURTISS-WRIGHT FLOW CONTROL CORPORATION







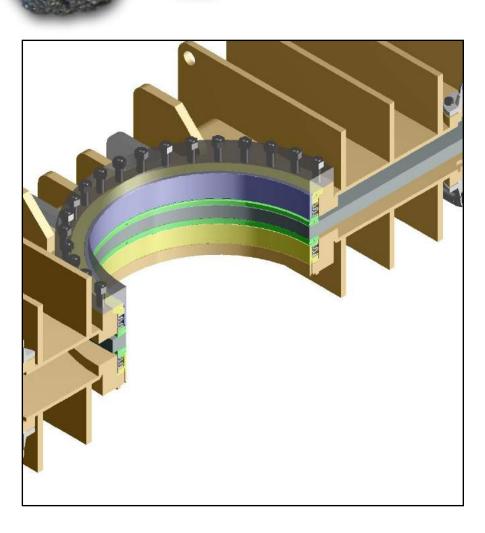
# **Top Unheading Device**











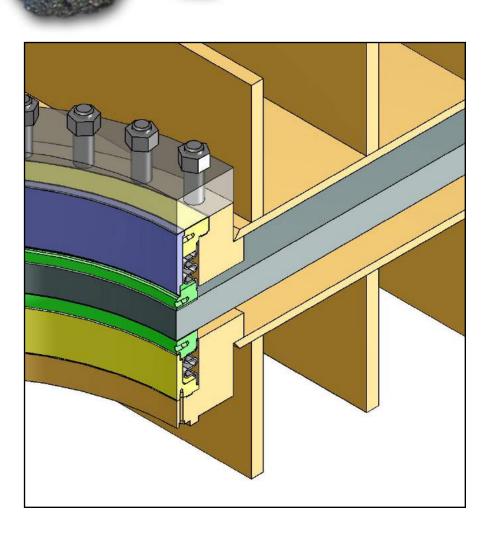
#### **Based on DeltaGuard technology**

- Double, live-loaded, dynamic, metal seats
- Designed to keep coke out of body cavity
- Steam purged body
- Low steam consumption
- Adaptable to all top head diameters
- Hydraulically actuated
- On-site maintenance
- DeltaGuide™ compatible









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# **DeltaGuard Top Units Sold**

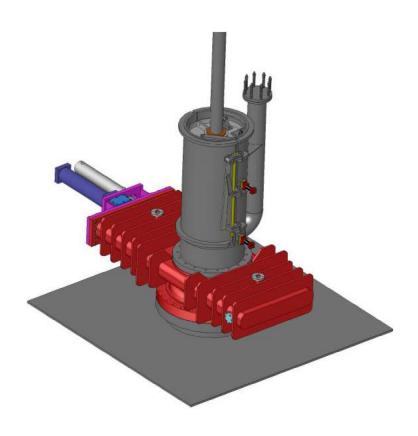
	Customer	Orders	Installations	Mfg
Chevron	ChevronTexaco-Pascagoula ChevronTexaco-El Segundo	6 6	6 6	0 0
SUNCOR	Suncor-Ft McMurray	2	0	2
UN PETROBRAS	Petrobras-Brasil	4	0	4
Ashland marriest attents	Marathon	2	0	2
	TOTAL TOP UNITS	20	12	8







#### **Drill Stem Guide / Blow-out Preventer**

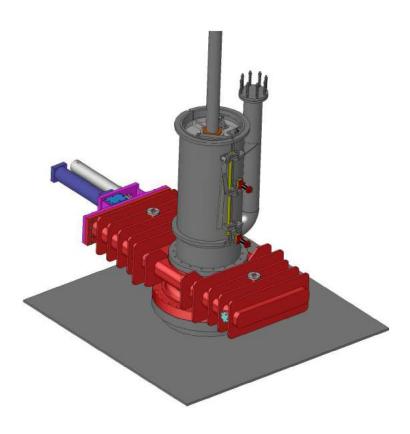


- Designed for maximum safety
- Fully enclosed head at all times
- No exposure to personnel or deck at any time
- Configurable to:
  - Contain blow-outs
  - Safely vent blow-outs
  - Guide bent drill-stems





# **Drill Stem Guide / Blow-out Preventer**

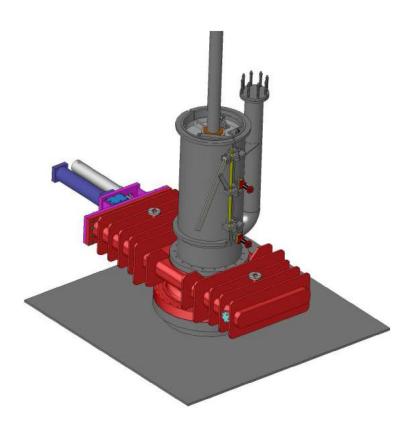


- Drill-head up
- Guide closed





# **Drill Stem Guide / Blow-out Preventer**

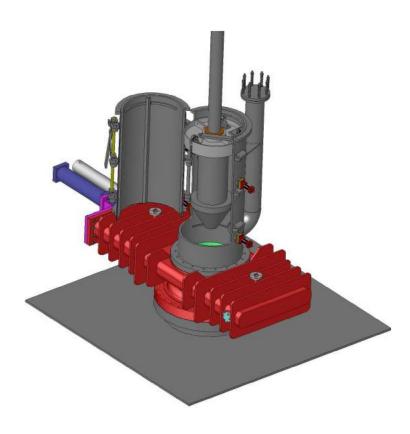


- Drill-head up
- Guide-lock released





### **Drill Stem Guide / Blow-out Preventer**

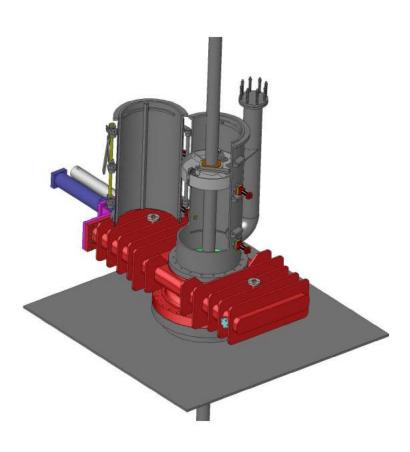


- Drill-head up
- Guide enclosure open





### **Drill Stem Guide / Blow-out Preventer**

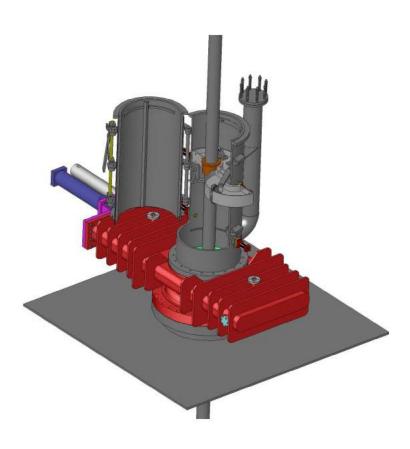


- Drill-head down
- Guide in maintenance position





# **Drill Stem Guide / Blow-out Preventer**

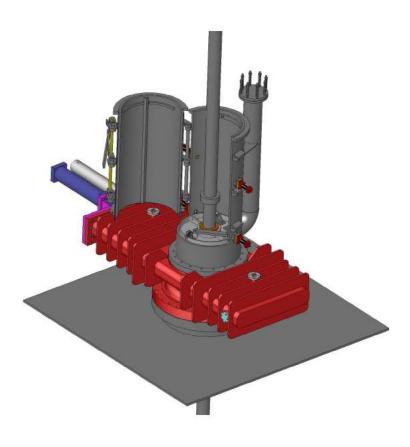


- Drill-head down
- Guide open





### **Drill Stem Guide / Blow-out Preventer**



- Drill-head down
- Guide in cutting position





#### Together we can make a difference

