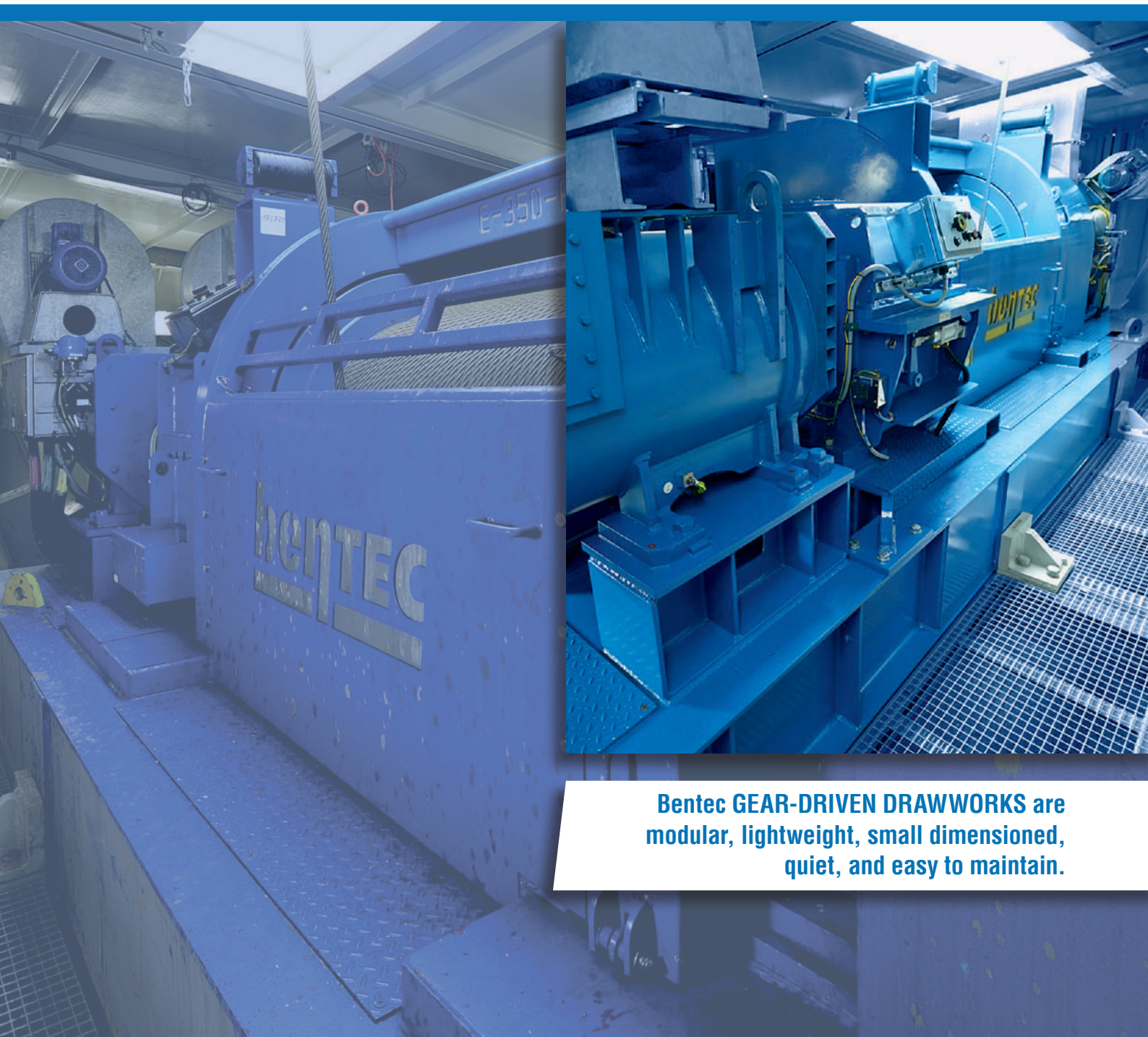
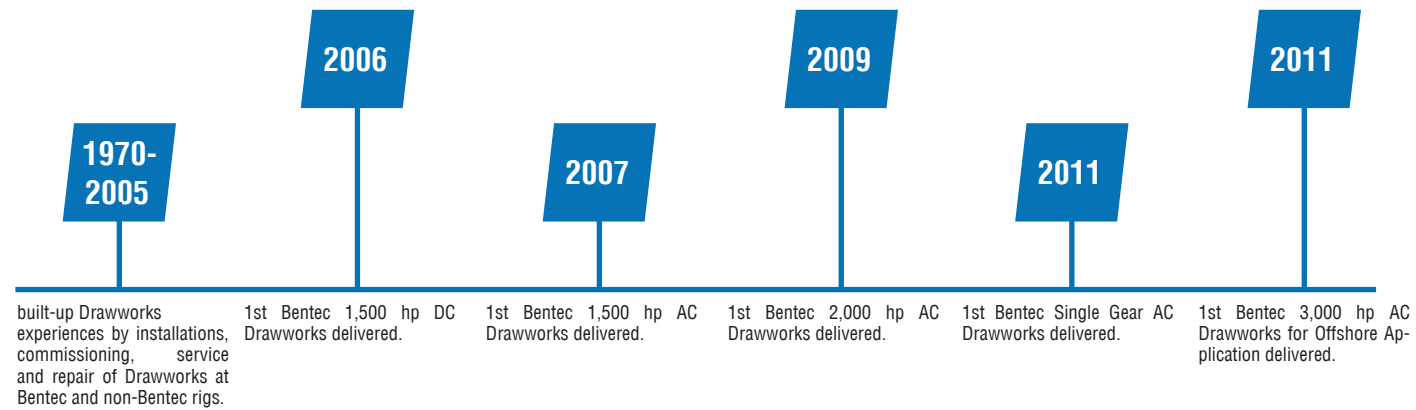
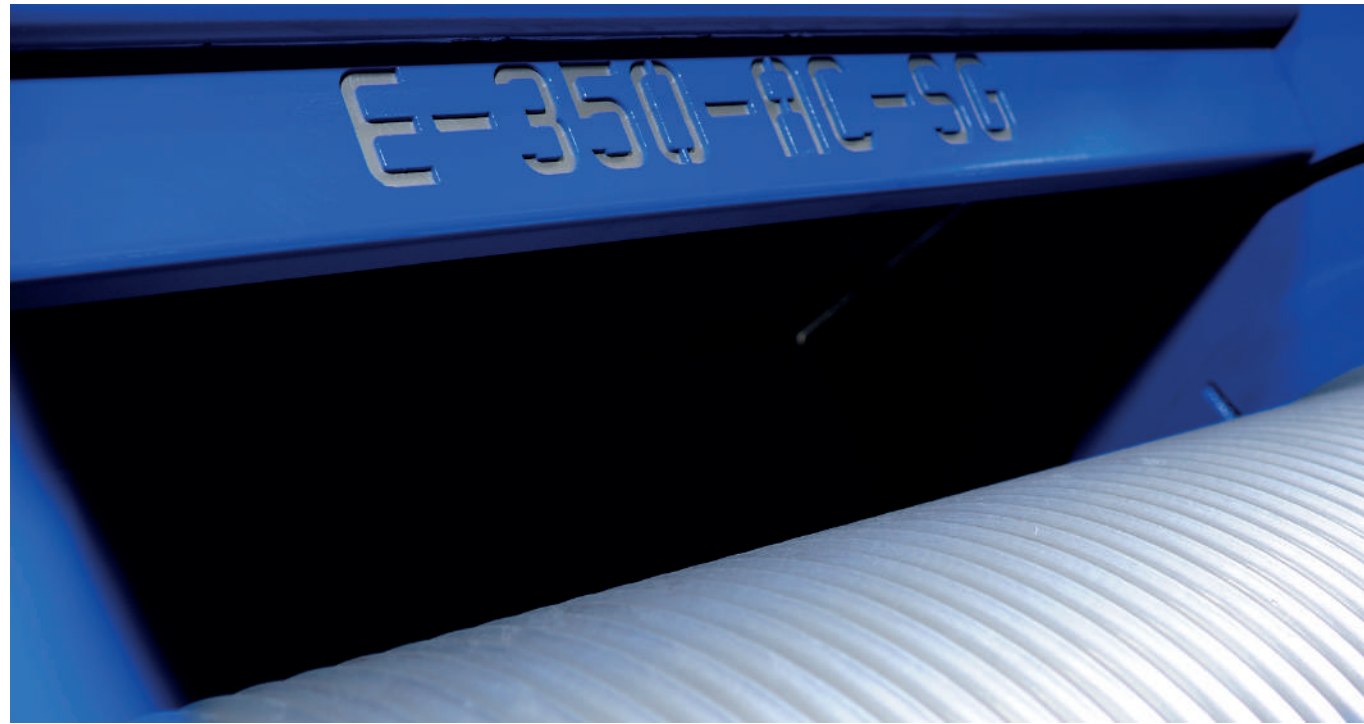


GEAR-DRIVEN DRAWWORKS



Bentec GEAR-DRIVEN DRAWWORKS are modular, lightweight, small dimensioned, quiet, and easy to maintain.



The Bentec Gear-Driven Drawworks are developed to provide the market with more reliable technology and more hoisting performance. Their light weight and small dimensions make them ideal for frequent rig moves or limited crane capacity. Thanks to our decades of experience in designing and manufacturing drilling equipment, the Bentec Gear-Driven Drawworks are equipped with modern in-house developed AC or DC motor technology and own in-house produced key components.

Bentec also reduced the number of sensors to a feasible level. The Bentec Gear-Driven Drawworks only need electrical power and air. No water or hydraulics are necessary, which simplifies the Drawworks significantly. Bentec provides many Drawworks solutions to meet our customers' requirements for existing or new built rigs.

All of these advantages make the Bentec Gear-Driven Drawworks to the best choice. Technically, a paired Drawworks is just a winch – but equipped with modern and reliable technology, it offers best performance - especially with our available Bentec Drilling Enhancement Software such as Anti Collision Systems.

Bentec AC-Motors

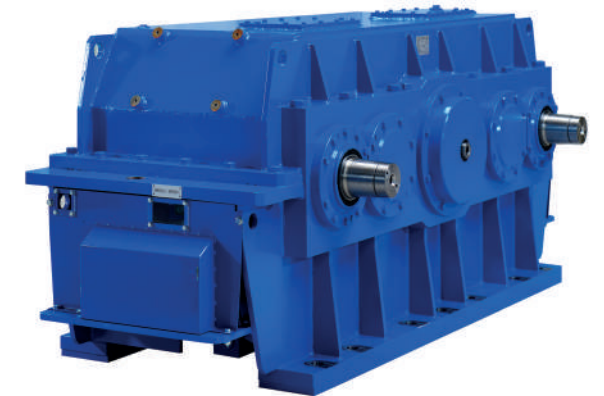
Bentec provides own designed AC-Motors dedicated for continuous Drawworks hoisting operation. These motors provide best-in class electrical performance and insulation classes with superior mechanical durability.

High-end quality materials, state of the art technology and a design meeting ISO 9001 standards ensure the highest degree of performance and uptime in harshest environment.



Bentec Gearboxes

Every Drawworks has its unique designed Gearbox. The transmission has been simplified to the natural purpose and all unnecessary components have been removed to simplify the Gearboxes. No forced lubrication enables less maintenance costs and increases uptime.



Bentec Eddy Current Brakes (air-cooled)

2-Speed Drawworks are equipped with in-house designed Eddy Current Brakes to remove water as a cooling medium. The Brake is dynamically air-cooled on-demand by VFD-controlled blower motors enabling also lowest noise emissions.



Single Gear AC-Drawworks

Technical Data

Drawworks	DW-E-200-AC-SG	DW-E-250-AC-SG	DW-E-350-AC-SG	DW-E-450-AC-SG
Continuous Power Rating	1,000 hp	1,250 hp	1,500 hp	2,000 hp
	735 kW	920 kW	1,100 kW	1,470 kW
Number of Motors	2 x 600 kW	2 x 850 kW	2 x 850 kW	2 x 1,150 kW
Gearbox Design	Multi-Speed	Multi-Speed	Multi-Speed	Multi-Speed
Eddy Current Brake	No	No	No	No
Max. Hook Load @6 Lines*	268,964 lbs	337,307 lbs	-	-
	122 t	153 t	-	-
Max. Hook Speed @6 Lines*	6.75 ft/sec	6.82 ft/sec	-	-
	2.06 m/sec	2.08 m/sec	-	-
Max. Hook Load @8 Lines*	357,150 lbs	445,333 lbs	564,383 lbs	-
	162 t	202 t	256 t	-
Max. Hook Speed @8 Lines*	5.07 ft/sec	5.12 ft/sec	5.77 ft/sec	-
	1.54 m/sec	1.56 m/sec	1.76 m/sec	-
Max. Hook Load @10 Lines*	440,925 lbs	551,155 lbs	698,865 lbs	842,166 lbs
	200 t	250 t	317 t	382 t
Max. Hook Speed @10 Lines*	4.05 ft/sec	4.09 ft/sec	4.62 ft/sec	4.66 ft/sec
	1.24 m/sec	1.25 m/sec	1.41 m/sec	1.42 m/sec
Max. Hook Load @12 Lines*	-	-	831,142 lbs	1,000,899 lbs
	-	-	377 t	454 t
Max. Hook Speed @12 Lines*	-	-	3.85 ft/sec	3.89 ft/sec
	-	-	1.17 m/sec	1.18 m/sec
Max. Hook Load @14 Lines*	-	-	-	1,133,176 lbs
	-	-	-	524 t
Max. Hook Speed @14 Lines*	-	-	-	3.33 ft/sec
	-	-	-	1.02 m/sec
Max. Number of Layers	3	3	3	3
Dimensions L x W	218.3" x 114.2"	219.4" x 114.2"	220.5" x 114.2"	234.4" x 117.5"
	5,546 mm x 2,900 mm	5,573 mm x 2,900 mm	5,600 mm x 2,900 mm	5,953 mm x 2,985 mm
Weight	63,934 lbs	66,140 lbs	70,548 lbs	77,162 lbs
	29 t	30 t	32 t	35 t

*values are based on the 2nd layer

Key Features

- no eddy current brake
- simplified modular design
- interchangeable Bentec AC-Motors
- 4Q-Mode with Anti-Collision System enables fastest tripping speeds
- single motor mode with one motor out of service possible
- slip & cut function and separate control console
- available drilling enhancement software:
 - Feed-Off
 - Auto-Driller
 - Anti-Collision System

Benefits

- fastest hoisting speeds at most compact footprints
- no cooling water required
- no hydraulics
- no forced lubrication
- lower maintenance costs
- lowest noise emissions

Technical Data

Dual Gear AC-Drawworks

Drawworks	DW-E-1250-AC	DW-E-1500-AC	DW-E-2000-AC	DW-E-3000-AC
Continuous Power Rating	1,250 hp	1,500 hp	2,000 hp	3,000 hp
	920 kW	1,100 kW	1,470 kW	2,200 kW
Number of Motors	2 x 600 kW	2 x 600 kW	2 x 850 kW	2 x 1,150 kW
Gearbox Design	2-Speed	2-Speed	2-Speed	2-Speed
Eddy Current Brake	Yes – Air Cooled	Yes – Air Cooled	Yes – Air Cooled	Yes – Air Cooled
Max. Hook Load @6 Lines*	410,060 lbs	-	-	-
	186 t	-	-	-
Max. Hook Speed @6 Lines**	8.66 ft/sec	-	-	-
	2.64 m/sec	-	-	-
Max. Hook Load @8 Lines*	540,133 lbs	626,113 lbs	-	-
	245 t	284 t	-	-
Max. Hook Speed @8 Lines**	6.50 ft/sec	7.38 ft/sec	-	-
	1.98 m/sec	2.25 m/sec	-	-
Max. Hook Load @10 Lines*	668,001 lbs	776,027 lbs	925,942 lbs	-
	303 t	352 t	420 t	-
Max. Hook Speed @10 Lines**	5.20 ft/sec	5.90 ft/sec	5.96 ft/sec	-
	1.58 m/sec	1.80 m/sec	1.82 m/sec	-
Max. Hook Load @12 Lines*	-	921,532 lbs	1,102,311 lbs	1,525,599 lbs
	-	418 t	500 t	692 t
Max. Hook Speed @12 Lines**	-	4.92 ft/sec	4.97 ft/sec	4.82 ft/sec
	-	1.50 m/sec	1.51 m/sec	1.47 m/sec
Max. Hook Load @14 Lines*	-	-	1,274,272 lbs	1,761,493 lbs
	-	-	578 t	799 t
Max. Hook Speed @14 Lines**	-	-	4.26 ft/sec	4.14 ft/sec
	-	-	1.30 m/sec	1.26 m/sec
Max. Hook Load @16 Lines*	-	-	-	1,992,979 lbs
	-	-	-	904 t
Max. Hook Speed @16 Lines**	-	-	-	3.62 ft/sec
	-	-	-	1.10 m/sec
Max. Number of Layers	3	3	4	4
Dimensions L x W	283" x 117.5"	305.3" x 117.5"	306.5" x 117.5"	338.6" x 125.5"
	7,190 mm x 2,985 mm	7,754 mm x 2,985 mm	7,785 mm x 2,985 mm	8,600 mm x 3,187 mm
Weight	83,776 lbs	92,594 lbs	94,800 lbs	132,244 lbs
	38 t	42 t	43 t	60 t

*values are based on the 1st gear 2nd layer ** values are based on 2nd gear

Key Features

- simplified modular design
- interchangeable Bentec AC-Motors
- 4Q-Mode with Anti-Collision System enables fastest tripping speeds
- single motor mode with one motor out of service possible
- slip & cut Function and separate control console
- available drilling enhancement software:
 - feed-off
 - auto-driller
 - anti-collision system

Benefits

- fastest hoisting speeds at most maximum hoisting performance
- no cooling water required
- no hydraulics
- no forced lubrication
- lower maintenance costs

Dual Gear DC-Drawworks

Technical Data

Drawworks	DW-E-1250-DC	DW-E-1500-DC	DW-E-2000-DC
Continuous Power Rating	1,250 hp	1,500 hp	2,000 hp
	920 kW	1,100 kW	1,470 kW
Number of Motors	2x GE 752 DC	2x GE 752 DC	2x GE 752 DC
Gearbox Design	2-Speed	2-Speed	2-Speed
Eddy Current Brake	Yes – Air Cooled	Yes – Air Cooled	Yes – Air Cooled
Max. Hook Load @6 Lines*	410,060 lbs	-	-
	186 t	-	-
Max. Hook Speed @6 Lines**	8.66 ft/sec	-	-
	2.64 m/sec	-	-
Max. Hook Load @8 Lines*	540,133 lbs	599,657 lbs	-
	245 t	272 t	-
Max. Hook Speed @8 Lines**	6.50 ft/sec	7.38 ft/sec	-
	1.98 m/sec	2.25 m/sec	-
Max. Hook Load @10 Lines*	668,001 lbs	740,753 lbs	839,961 lbs
	303 t	336 t	381 t
Max. Hook Speed @10 Lines**	5.20 ft/sec	5.90 ft/sec	5.96 ft/sec
	1.58 m/sec	1.80 m/sec	1.82 m/sec
Max. Hook Load @12 Lines*	-	881,849 lbs	998,694 lbs
	-	400 t	453 t
Max. Hook Speed @12 Lines**	-	4.92 ft/sec	4.97 ft/sec
	-	1.50 m/sec	1.51 m/sec
Max. Hook Load @14 Lines*	-	-	1,153,018 lbs
	-	-	523 t
Max. Hook Speed @14 Lines**	-	-	4.26 ft/sec
	-	-	1.30 m/sec
Max. Hook Load @16 Lines*	-	-	-
	-	-	-
Max. Hook Speed @16 Lines**	-	-	-
	-	-	-
Max. Number of Layers	3	3	3
Dimensions L x W	286" x 117.5"	307.7" x 117.5"	301.2" x 117.5"
	7,263 mm x 2,985 mm	7,816 mm x 2,985 mm	7,650 mm x 2,985 mm
Weight	83,775 lbs	92,594 lbs	99,200 lbs
	38 t	42 t	45 t

*values are based on the 1st gear and 2nd layer ** values are based on 2nd gear

Key Features

- interchangeable DC motors
- simplified modular design
- 4Q-Mode with Anti-Collision System enables fastest tripping speeds
- slip & cut function and separate control console
- available drilling enhancement software:
 - Feed-Off
 - Auto-Driller
 - Anti-Collision System

Benefits

- fastest hoisting speeds at most maximum hoisting performance
- no cooling water required
- no hydraulics
- no forced lubrication
- lower maintenance costs

Whether a simple joystick control or a touch screen interface system, the main purpose of the controls is to help the driller to drill and trip most efficiently. Bentec provides automated drilling control systems since more than two decades with the approach to integrate all components aiming that they interact in a most efficient way with each other.

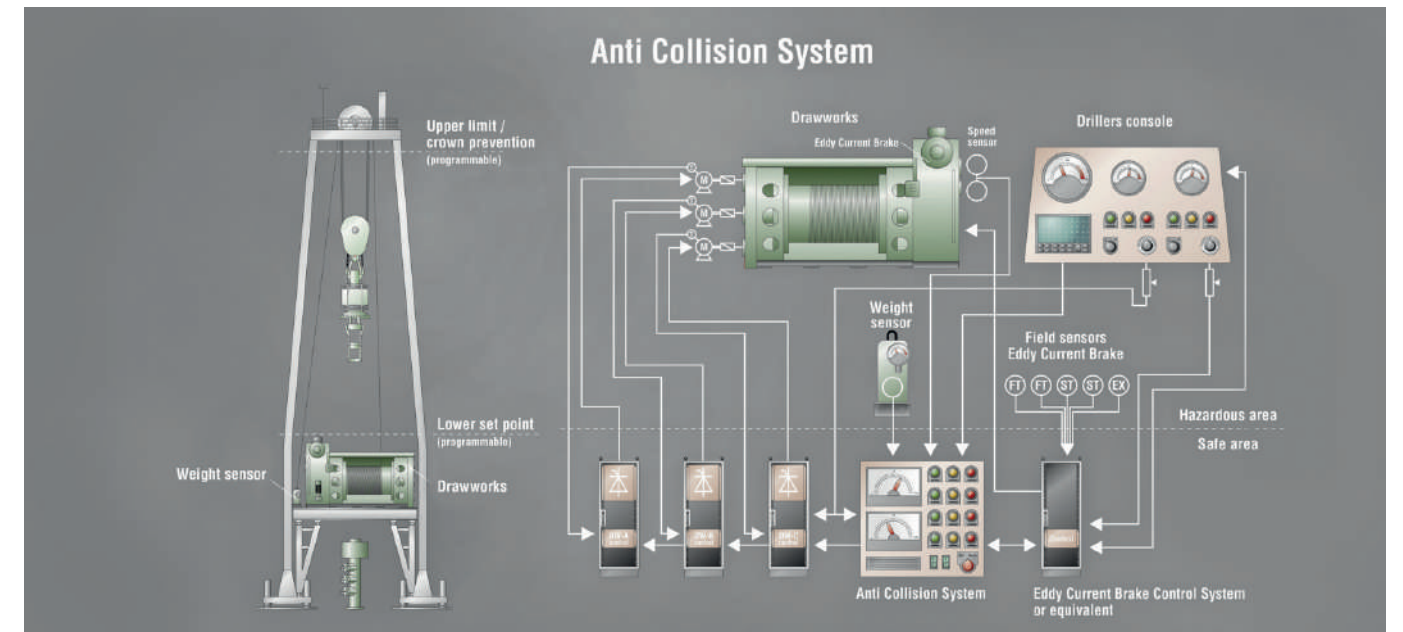
The following products are also available for Drawworks Systems:

Software Enhancement Solutions

- Auto-Driller
- Anti-Collision System
- infoDRILL
- Rig Control System

Electrical Equipment

- VFD Systems



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Bentec GmbH Drilling & Oilfield Systems
Deilmannstraße 1
48455 Bad Bentheim
Germany
Phone: +49 (0)5922 72 80
Fax: +49 (0)5922 72 457
Internet: www.bentec.com
E-Mail: sales@bentec.com

LLC Bentec Tyumen, Russia
2 km from Stary Tobolsky Trakt 8 a
625014 Tyumen
Russia
Phone: +7 (0)3452 6839 00
Fax: +7 (0)3452 6839 26
Internet: www.bentec.ru
E-Mail: tyumen@bentec.com

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