



# Advanced Top Drive Systems





**NorDrill have been delivering state of the art Top Drive systems for the last 14 years, to the oil and gas industry.**

Our design philosophy is to reduce downtime by being cost efficient throughout the lifetime of our products. NorDrill's Top Drive systems are equipped with advanced technology to ensure safety and efficiency on drill floor.

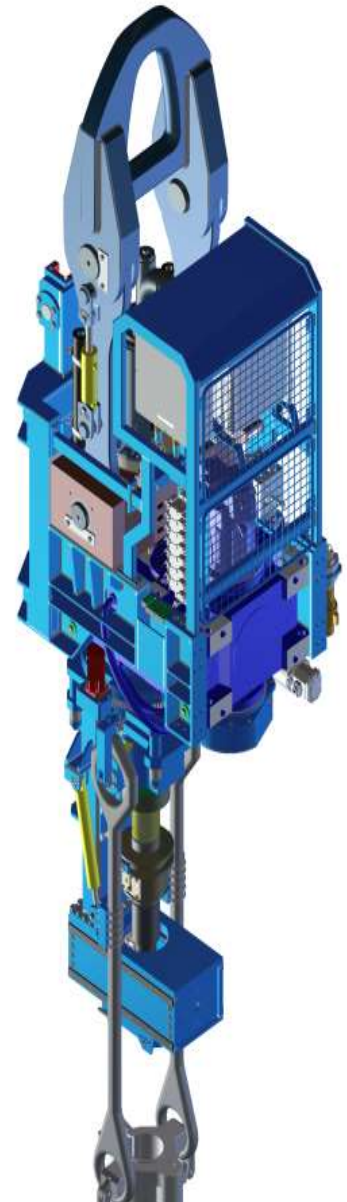
The company's design meets any drilling applications whether offshore, desert or arctic environments.

NorDrill specialize in tailor made solutions in every size and configuration to meet our client's needs. All our Top Drives are designed to meet the API 8-C standards

Throughout our expertise, products and operational support, NorDrill makes sure our clients are sustainable both now, and in the future.

# Main Features

<b>Modular Design</b>	Enables larger overhauls and repairs on-site
<b>Bearings</b>	High capacity bearings
<b>Communication</b>	Single BUS cable for communication between the Power Pack and the Top Drive
<b>Delivery</b>	Can be delivered as standalone system, or integrated in existing rig structure
<b>Interface</b>	Intelligent, safe and intuitive interface
<b>Intelligence</b>	Advanced sensors will alert the user of developing issues, so no sudden shut down occurs
<b>Support</b>	Remote Access System enables NorDrill's engineers to support customers all over the world without the need of on-site assistance
<b>Pipehandler</b>	Fully remote operated PH with 360dg free rotation, position lock, IBOP operation, bi-directional link tilt and backup tong. Also controls hydraulic or pneumatic elevator when installed.
<b>Lubrication system</b>	Self-maintained gear lubrication system
<b>Gear</b>	Custom made gear ratio for optimal speed and torque
<b>IBOP</b>	Single IBOP (mud saver valve) remotely operated from drillers panel
<b>Link tilt system</b>	Remote operated link tilt system, total 70 degrees
<b>Thread saver</b>	Hydraulic weight compensation to make stabbing in/spinning out soft, and free from risk of damage to threads on make-up or break-out Also function as damping like conventional spring-hook
<b>Loops</b>	Quick connectors for all loops



## Technical information - Electrical (AC) driven Top Drives

150 Tons 350HP	Ratio	Gear 1 drill torque	Gear 1 max rpm	Gear 2 drill torque	Gear 2 max rpm	Breakout Torque
	11,6	15.000 ft.lb @ 90 rpm	120 rpm	9.250 ft.lb @ 135 rpm	180 rpm	27.500 ft.lb
	12,7	16.500 ft.lb @ 80 rpm	110 rpm	9.250 ft.lb @ 135 rpm	180 rpm	30.000 ft.lb
	14,4	18.500 ft.lb @ 75 rpm	95 rpm	10.000 ft.lb @ 125 rpm	165 rpm	34.500 ft.lb

250 Tons 500HP	Ratio	Gear 1 drill torque	Gear 1 max rpm	Gear 2 drill torque	Gear 2 max rpm	Breakout Torque
	9,9	18.500 ft.lb @ 100 rpm	120 rpm	10.500 ft.lb @ 160 rpm	200 rpm	34.000 ft.lb
	11,6	21.000 ft.lb @ 85 rpm	105 rpm	10.500 ft.lb @ 160 rpm	200 rpm	39.000 ft.lb
	12,7	23.000 ft.lb @ 75 rpm	95 rpm	12.000 ft.lb @ 145 rpm	180 rpm	42.000 ft.lb
14,4	26.000 ft.lb @ 70rpm	85 rpm	12.000 ft.lb @ 145 rpm	180 rpm	48.000 ft.lb	

350 Tons 700HP	Ratio	Gear 1 drill torque	Gear 1 max rpm	Gear 2 drill torque	Gear 2 max rpm	Breakout torque
	9,9	25.750 ft.lb @ 85 rpm	120 rpm	13.750 ft.lb @ 145 rpm	210 rpm	80.000 ft.lbs
	11,6	30.000 ft.lb @ 75 rpm	105 rpm	14.500 ft.lb @ 140 rpm	200 rpm	80.000 ft.lbs
	12,7	32.750 ft.lb @ 65 rpm	95 rpm	14.500 ft.lb @ 140 rpm	200 rpm	80.000 ft.lbs

500 Tons 1000HP	Ratio	Gear 1 drill torque	Gear 1 max rpm	Gear 2 drill torque	Gear 2 max rpm	Breakout torque
	10,1	36.750 ft.lb @ 105 rpm	180 rpm	27.000 ft.lb @ 135 rpm	225 rpm	80.000 ft.lb
	11,4	41.500 ft.lb @ 95 rpm	160 rpm	28.750 ft.lb @ 125 rpm	210 rpm	80.000 ft.lb
	12,4	45.000 ft.lb @ 85 rpm	145 rpm	30.000 ft.lb @ 120 rpm	200 rpm	80.000 ft.lb
14,2	52.000 ft.lb @ 75 rpm	125 rpm	34.500 ft.lb @ 105 rpm	175 rpm	80.000 ft.lb	

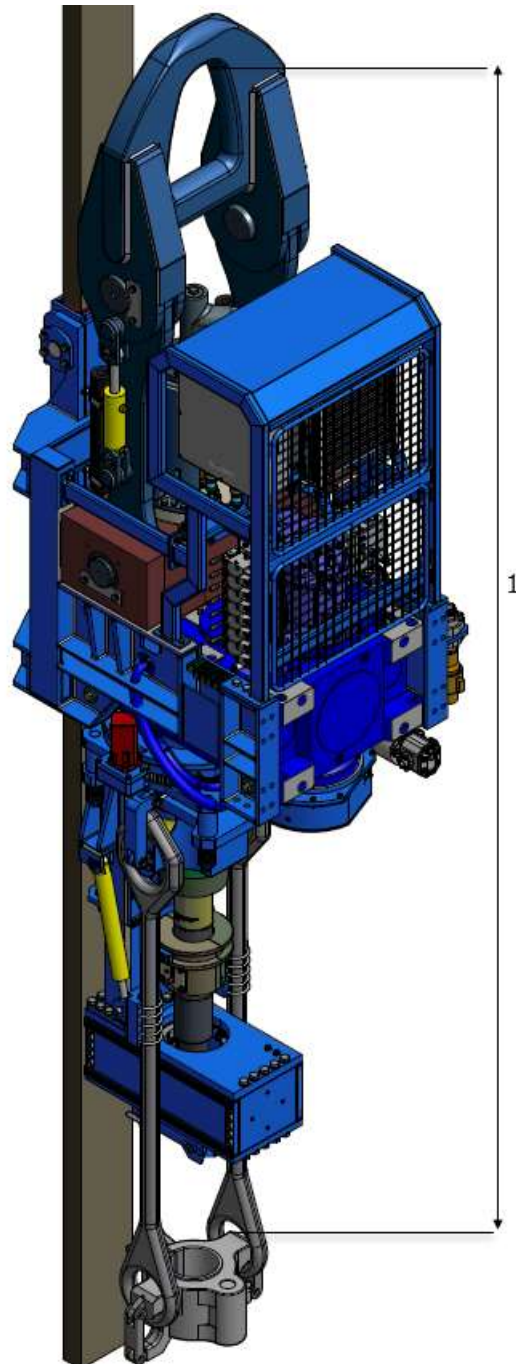
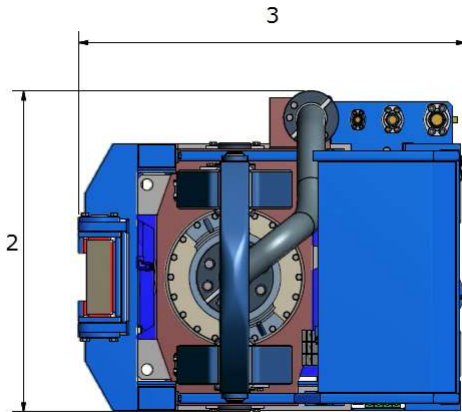
## Technical Information - Hydraulic driven Top Drives

<b>250 Tons 400HP</b>	Ratio	Nominal drill torque	Drill torque at max rpm	Breakout torque
	9,9	18.000 ft.lb @ 115 rpm	8.500 ft.lb @ 210 rpm	25.000 ft.lb
	11,6	21.000 ft.lb @ 100 rpm	8.500 ft.lb @ 200 rpm	29.500 ft.lb
	12,7	22.500 ft.lb @ 90 rpm	9.000 ft.lb @ 190 rpm	32.000 ft.lb
	14,4	26.000 ft.lb @ 80 rpm	10.250 ft.lb @ 165 rpm	36.000 ft.lb

<b>500 Tons 1150HP</b>	Ratio	Nominal drill torque	Drill torque at max rpm	Breakout torque
	11,4	38.500 ft.lb @ 150 rpm	25.500 ft.lb @ 230 rpm	80.000 ft.lb
	12,4	42.250 ft.lbs @ 140 rpm	28.000 ft.lb @ 210 rpm	80.000 ft.lb
	14,2	48.500 ft.lbs @ 125 rpm	32.000 ft.lb @ 180 rpm	80.000 ft.lb
	15,5	53.000 ft.lbs @ 110 rpm	35.000 ft.lb @ 165 rpm	80.000 ft.lb

# Dimensions

Measure		150 Tons	250 Tons	350 Tons	500 Tons
1	mm / in	4600 / 181	4800 / 188	5013 / 197	5274 / 207
2	mm / in	900 / 35	1100 / 43	1148 / 45	1355 / 53
3	mm / in	1520 / 59	1725 / 67	1843 / 72	2175 / 85





# **NorDrill**

**Innovation & Power combined**

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