

Bohrmeister®

INNOVATIVE DRILLING SOLUTIONS





BOHRMEISTER “HANDS FREE” ROD HANDLING SOLUTIONS

By Heinz von Fintel

TRADITIONAL DRILL SITES



ROD HANDLING RISK ASSESSMENT

		CONSEQUENCE		
		<u>Low</u> <i>Little to no impact</i>	<u>Medium</u> <i>Medium term -ve impact</i>	<u>High</u> <i>Irreversible or long term -ve impact</i>
LIKELIHOOD	<u>High</u> <i>>75% Chance event will occur in life of plan</i>	4	7	
	<u>Medium</u> <i>25% <= 75% Chance event will occur in life of plan</i>	2	5	8
	<u>Low</u> <i><25% Chance event will occur in life of plan</i>		3	6

**MANUAL ROD HANDLING:
HIGH RISK**

**“HANDS FREE” ROD HANDLING:
LOW RISK**

Critical Risk	
High Risk	
Moderate Risk	
Low Risk	

MK I ROD HANDLER (2007)



LIMITATIONS

- VERTICAL HANDLING ONLY
- EXTERNAL CLAMPING (NOT FAILSAFE)
- WEAR & TEAR TOO HIGH
- LOW ROD STORAGE CAPACITY
- LOADING MAGAZINE BY HAND



MK II ROD HANDLER (2011)



IMPROVEMENTS

- ANGLE DRILLING
- POSITIVE CLAMPING (FAILSAFE)
- WEAR & TEAR LOW
- BIGGER STORAGE CAPACITY
- SEMI AUTO LOADING OF MAGAZINE
- UNIVERSAL FOR USE WITH ALL RIGS
- VARIOUS ROD SIZES
- CAN HANDLE CASINGS
- VARIOUS MOUNTING OPTIONS



ROD HANDLER & ROTO-MAGAZINE SUB ASSEMBLIES FOR TOP HEAD DRIVE DRILL RIGS

1) ROTO-MAGAZINE™

2) LIFTING SKIRT

3) POWERED ROLLERS

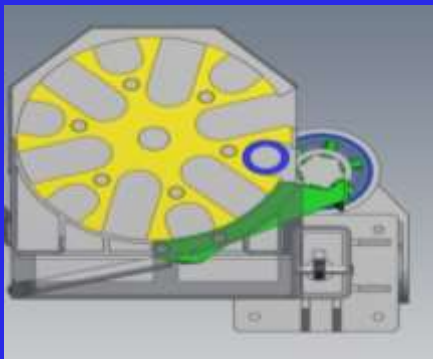
4) TELESCOPE ARM

5) CLAMP ASSEMBLY

6) ROTARY ACTUATOR



ROTO-MAGAZINE CONCEPT



20130816_130604.mp4



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BOHRMEISTER ROD HANDLER MOUNTING CONFIGURATIONS



RIG MOUNTED



FREE STANDING



TRAILER MOUNTED



CRAWLER ROD CARRIER



BOHRMEISTER-ROD-CARRIER-001.AVI



BOHRMEISTER-ROD-CARRIER-002.AVI



SN850133.AVI

Bohrmeister[®]

BOHRMEISTER ROD HANDLER OPTIONS

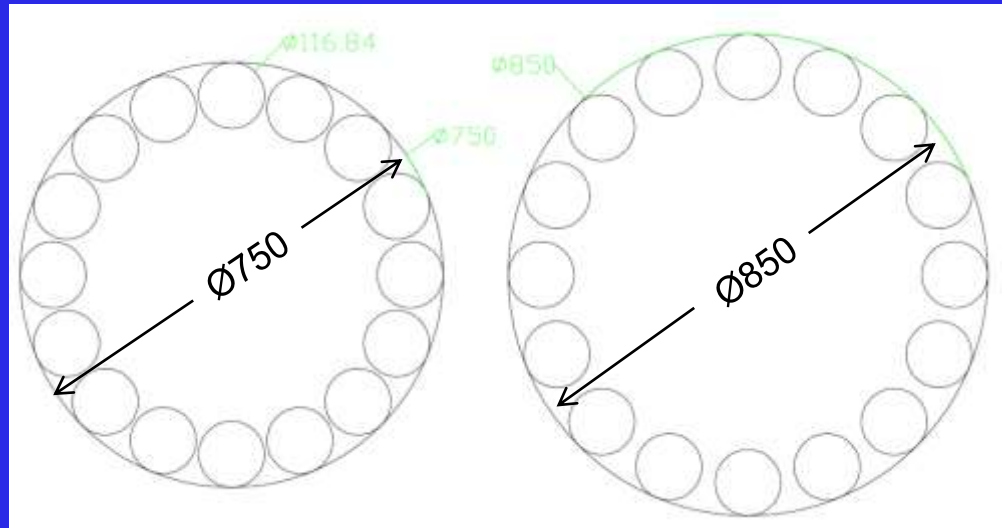
- 1) REMOTE WIRELESS PENDANT
- 2) UNIVERSAL CLAMP FOR VARIOUS SIZES
- 3) VARIOUS SPINDLE SIZES
- 4) FREE STANDING KIT
- 5) POSITION SENSORS FOR ACCURATE ROD ALIGNMENT
- 6) SWING OUT FUNCTION IF HEAD DOES NOT SLIDE OUT



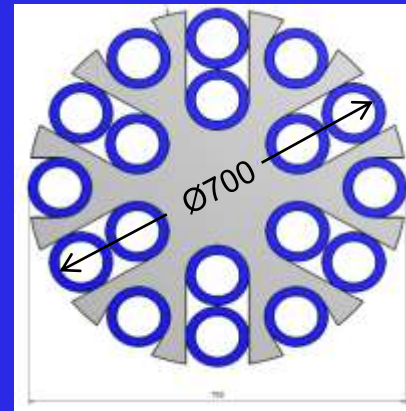
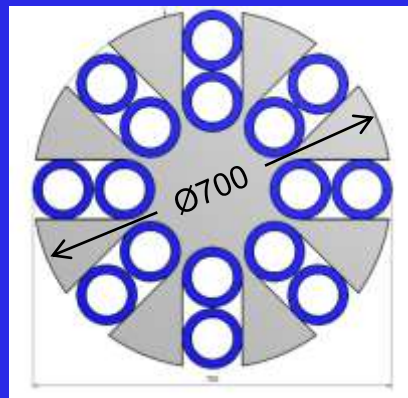
ROTO-MAGAZINE SPINDLE CONFIGURATION

Example: 4 1/2" (PQ)

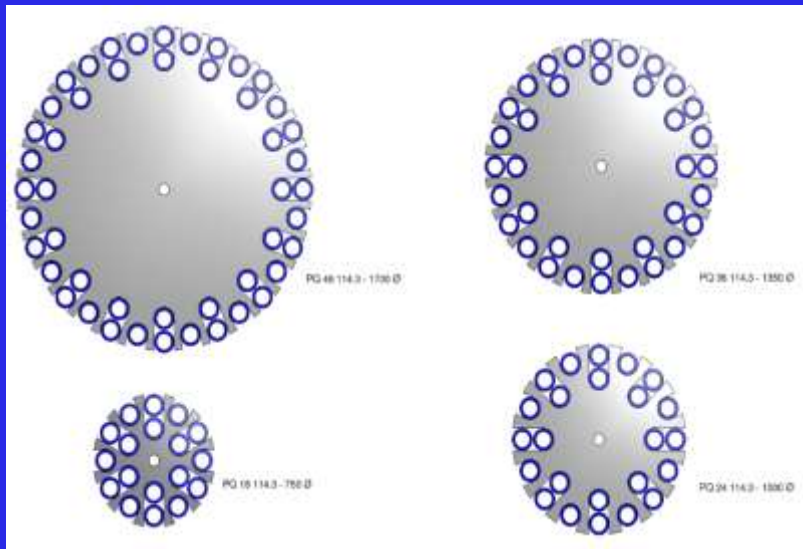
16 off
Single Row



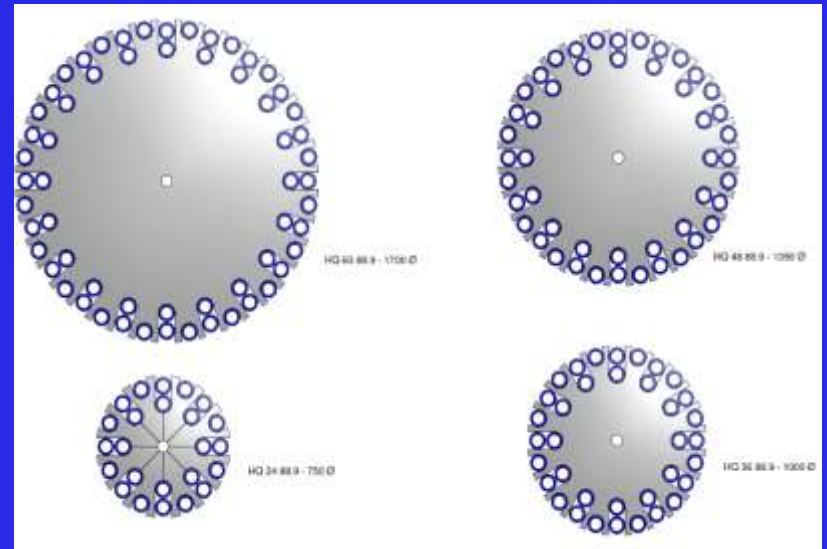
18 off
Double Row



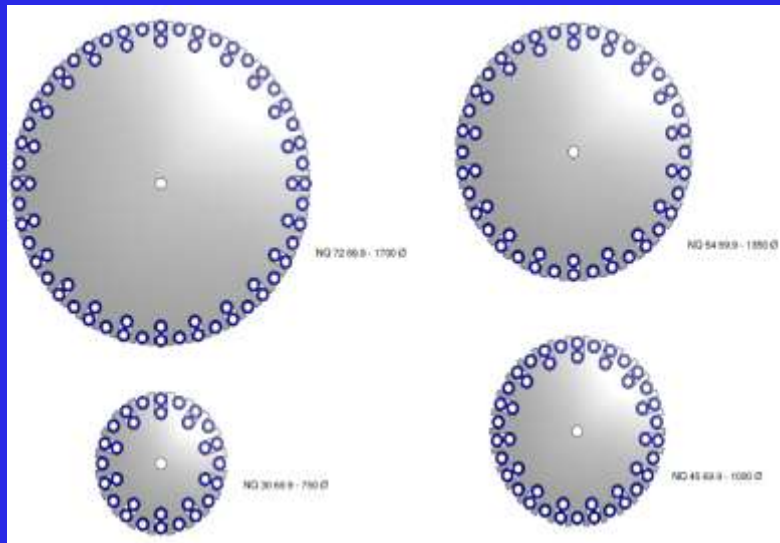
PQ ROD NESTING



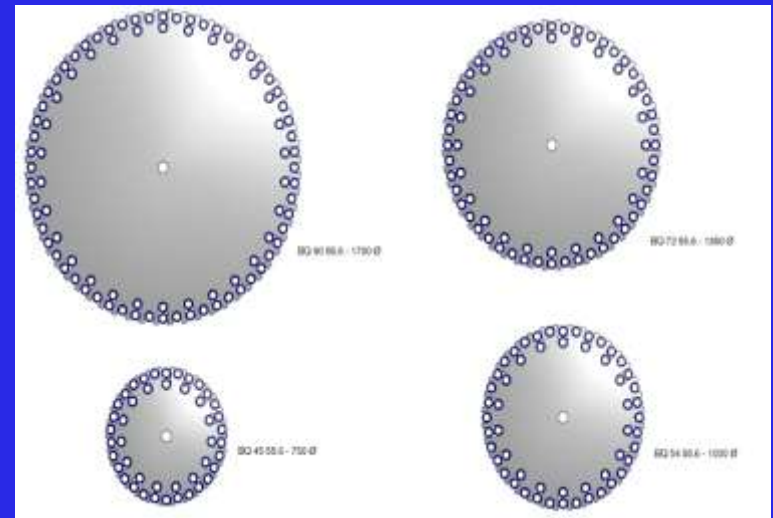
HQ ROD NESTING



NQ ROD NESTING



BQ ROD NESTING



NEW

BOHRMEISTER ROD HANDLER FOR SPINDLE HEAD CORING RIGS



Rod Handler1.wmv



**PATENT
PENDING**

Bohrmeister®

NEW

BOHRMEISTER UNIVERSAL TRAILER MOUNTED ROD HANDLER FOR CORING & RC RIGS



Video.wmv



**PATENT
PENDING**

Bohrmeister®

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BOHRMEISTER ROD HANDLER FOR DIRECTIONAL DRILLING (1600m NDBR X6m)



Video Screen



**PATENT
PENDING**

Bohrmeister®

NEW

NEW DEVELOPMENTS

ROD HANDLING SOLUTION FOR DEWATERING RIGS

(350m 6 1/2" x 6m, 300kg ea Rods)



Bohrmeister®

NEW

NEW DEVELOPMENTS

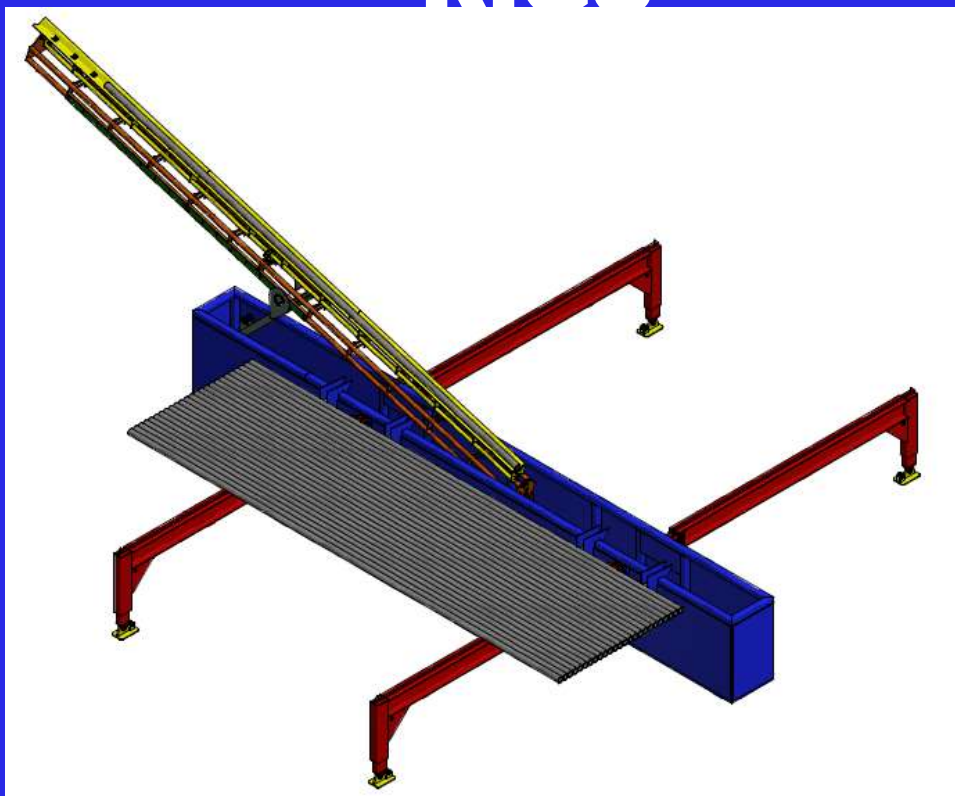
ROD HANDLING SOLUTION FOR

DD RIGS, RC, CORE AND OIL & GAS

RIGS



Video - Loading.mpeg



Video - OFFLOADING.mpeg

Bohrmeister®

BENEFITS & FEATURES

- Our products are universal & are compatible with all makes of rig.
- Our focus is to eliminate the following safety risks without compromising production:
 - No more need for trestles & handling of rods when moving from hole to hole
 - No more suspended energy when rods are hoisted & lowered
 - No more pendulum effect when hoisting & lowering rods with winch cable
- Rods are held in a cup clamp (for top head rigs) or trough for (for spindle head rigs) making it failsafe unlike externally clamped rod manipulators which rely on friction/clamp pressure.
- Reduces Crew Fatigue
- Reduces Crew Size
- Safe
- Simple
- Schlick

NEW

BOHRMEISTER BREAK OUT CLAMPS



SINGLE



DOUBLE



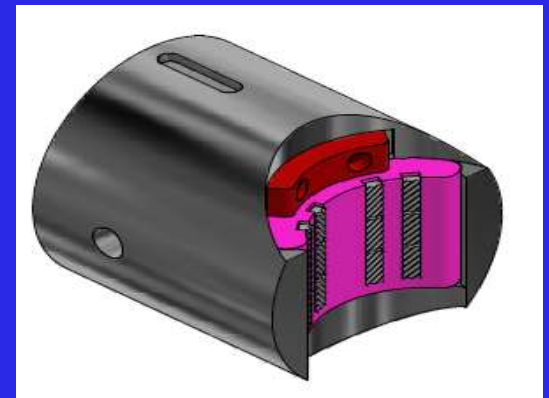
DOUBLE + STEMLOCK



V-CLAMP OLD DESIGN



WRAP AROUND DESIGN



NEW JAW DESIGN

REFERENCES

Some of our clients who are using our rod handlers & break out clamps are:

- GeoSearch
- Aguaterro
- Zaiman Drilling
- Sasol
- BHP Billiton
- Infracore / Barrick
- Major Drilling Canada
- Van Zyl's / Master Drilling
- Gecko Drilling

Questions?