

# HBG Clutches

## One-Way Clutches for Hydro-Dynamic Drilling Rigs



# Design Features

## Full-phased Cam and Rollers

Uniform Load Distribution is assured by full-phase true cylindrical rollers enclosed in a cage to act in unison on flat cam surfaces. The cage forces all the rollers to engage simultaneously, accurately maintaining their relative positions, thereby assuring that each roller will carry an equal share of the load.

Other designs utilize individual springs acting on each roller. This allows different energizing forces to cause one or more of the rollers to engage in the load carrying position prematurely, or to skew. This action will concentrate the full clutch load on one or just a few rollers causing destruction and failure of the rollers and clutch.

## No Loose Parts

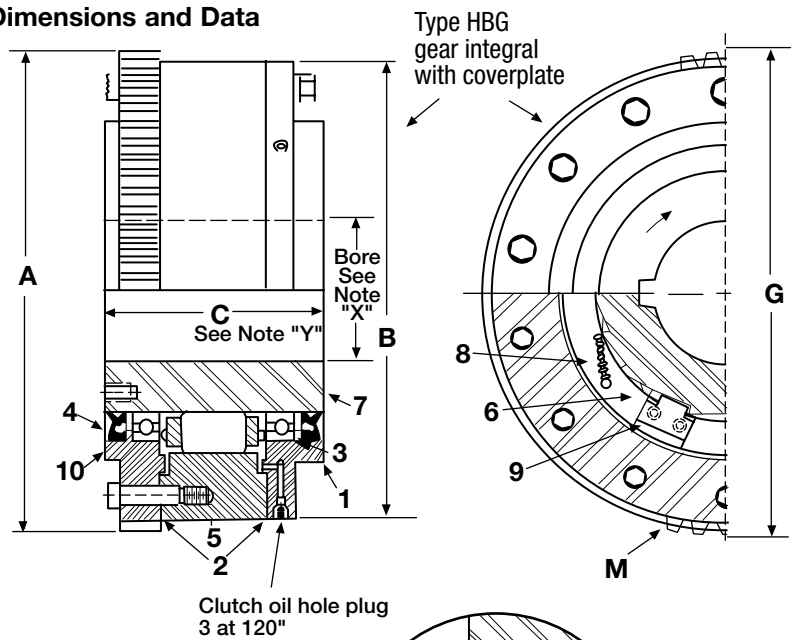
Rollers are contained in a spring-actuated cage. The parts will not spill or drop if field disassembly should be required.

## No Backlash

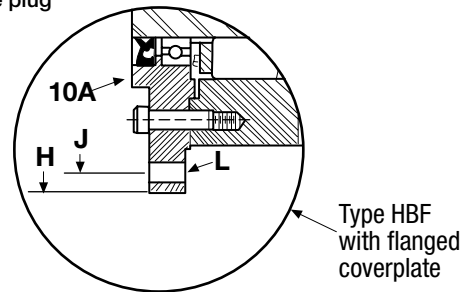
When the string is lowered and the drum shaft rotates the outer race of the clutch, the spring-actuated roller cage uniformly and instantaneously moves all of the rollers into the driving position.

## Marland One-Way HB clutches the only one-way clutch for hydro-dynamic brakes on drilling rigs.

### Dimensions and Data



Part	Description
1	Coverplate
2	Gasket
3	Ball Bearing
4	Oil Seal
5	Outer Race
6	Roller Assembly
7	Cam
8	Spring
9	Stop Lug
10	Geared Coverplate
10A	Flanged Coverplate



### Notes:

X—Taper or straight bore furnished as required.

Y—Single or double keyway as specified.

# Design Features

Type HBG & HBF Size	Rated Torque lb. ft.	Max. Bore & Keyway		Dimensions in Inches						No. Holes & Sizes	No. Teeth & Pitch	Oil Cap Pints	Shipping Weight In Pounds	
		Straight Bore	Keyway at Max. Bore	A	B	C	G	H	J				L	M
12 MA	12,000	4.50	1 x .375	11.75	11.06	5.86	11.90	14.25	13.25	$\frac{14}{17/32}$	$\frac{69}{6/8}$	5/8	130	150
18 MA	18,000	5.438	1.25 x .438	13.58	12.94	6.25	13.74	16.25	15	$\frac{14}{21/32}$	$\frac{80}{6/8}$	7/8	180	210
27 MA*	27,000	6.50	1.50 x .50	13.59	13.03	7	14.30	16.25	15	$\frac{14}{21/32}$	$\frac{40}{3/6}$	1	265	300
45 MA	45,000	7	1.75 x .563	17.65	16.69	8	17.85	20.25	18.75	$\frac{14}{25/32}$	$\frac{69}{4/5}$	1-5/8	390	440
63 MA**	63,000	8	2 x .688	17.92	17.34	8.75	18.62	23	21.25	$\frac{16}{29/32}$	$\frac{53}{3/6}$	2	515	555
90 MA	90,000	9	2.50 x .75	21.90	20.81	9	22.11	26.75	24.75	$\frac{16}{1-1/32}$	$\frac{86}{4/5}$	2-3/4	700	840
135 MA***	135,000	10	2.50 x .875	24.70	23.81	10	25.11	32	29.50	$\frac{18}{1-9/32}$	$\frac{98}{4/5}$	3-1/4	1100	1300
180 MA	180,000	11.75	3 x 1	27.90	26.96	10.75	28.05	34	31.50	$\frac{20}{1-3/32}$	$\frac{110}{4/5}$	4-1/2	1500	1700

\* The standard type HBG-27MA is interchangeable with a NOV "C-2" unit. Marland also offers a variation of the standard type HBG-27MA which is interchangeable with a NOV "C" unit.

\*\* The standard type HBG-63MA is interchangeable with a NOV "A" unit.

\*\*\* Marland also offers a variation of the standard type HBG-135MA which is interchangeable with a NOV "D-1" unit.

All Customer Service phone numbers shown in bold

## Belted Drives and Sheaves

### TB Wood's

*Belted Drives*

Chambersburg, PA - USA  
1-888-829-6637 – Press #5

For application assistance:  
1-888-829-6637 – Press #7

## Couplings

### Ameridrives

*Mill Spindles, Ameriflex,  
Ameridisc*

Erie, PA - USA  
1-814-480-5000

*Gear Couplings*

San Marcos, TX - USA  
1-800-458-0887

*Universal Joints, Drive Shafts,  
Mill Gear Couplings*

Erie, PA - USA  
1-920-593-2444

### Bibby Turboflex

*Disc, Gear, Grid Couplings,  
Overload Clutches*

Dewsbury, England  
+44 (0) 1924 460801

Boksborg, South Africa  
+27(0) 11 918 4270

### Guardian Couplings

*Engineered Flywheel Couplings,  
Engine Housings and Pump Mounts,  
Flexible Shaft Couplings*

Michigan City, IN - USA  
1-219-874-5248

### Huco

*Precision Couplings and  
Air Motors*

Hertford, England  
+44 (0) 1992 501900

Chambersburg, PA - USA  
1-888-829-6637

### Lamiflex Couplings

*Flexible Couplings, Bearing  
Isolators, and Coupling Guards*

Cotia, SP - Brasil  
+55 (11) 4615-6300

## Couplings Cont.

### TB Wood's

*Elastomeric Couplings*

Chambersburg, PA - USA  
1-888-829-6637 – Press #5

For application assistance:  
1-888-829-6637 – Press #7

*General Purpose Disc Couplings*

San Marcos, TX - USA  
1-888-449-9439

## Electromagnetic Clutches and Brakes

### Inertia Dynamics

*Spring Set Brakes; Power On and  
Wrap Spring Clutch/Brakes*

New Hartford, CT - USA  
1-800-800-6445

### Matrix

*Electromagnetic Clutches  
and Brakes, Pressure Operated  
Clutches and Brakes*

Brechin, Scotland  
+44 (0) 1356 602000

New Hartford, CT - USA  
1-800-825-6544

### Warner Electric

*Electromagnetic Clutches  
and Brakes*

New Hartford, CT - USA  
1-800-825-6544

For application assistance:  
1-800-825-9050

Saint Barthélemy d'Anjou, France  
+33 (0)2 41 21 24 24

*Precision Electric Coils and  
Electromagnetic Clutches and  
Brakes*

Columbia City, IN - USA  
1-260-244-6183

## Engineered Bearing Assemblies

### Kilian

*Engineered Bearing  
Assemblies*

Syracuse, NY - USA  
1-315-432-0700

## Gearing

### Bauer Gear Motor

*Geared Motors*

Esslingen, Germany  
+49 (711) 3518-0

Middlesex, NJ - USA  
1-732-469-8770

### Boston Gear

*Enclosed and Open Gearing,  
Electrical and Mechanical  
P.T. Components*

Charlotte, NC - USA  
1-800-825-6544

For application assistance:  
1-800-816-5608

### Nuttall Gear and Delroyd Worm Gear

*Worm Gear and  
Helical Speed Reducers*

Niagara Falls, NY - USA  
1-716-298-4100

## Heavy Duty Clutches and Brakes

### Industrial Clutch

*Pneumatic and Oil Immersed  
Clutches and Brakes*

Waukesha, WI - USA  
1-262-547-3357

### Svendborg Brakes

*Industrial Brakes and  
Brake Systems*

Vejstrup, Denmark  
+45 63 255 255

### Twiflex

*Caliper Brakes and Thrusters*

Wichita Falls, TX - USA  
1-844-723-3483

Twickenham, England  
+44 (0) 20 8894 1161

### Wichita Clutch

*Pneumatic Clutches  
and Brakes*

Wichita Falls, TX - USA  
1-800-964-3262

Bedford, England  
+44 (0) 1234 350311

## Linear Products

### Warner Linear

*Linear Actuators*

New Hartford, CT - USA  
1-800-825-6544

For application assistance:  
1-800-825-9050

Saint Barthélemy d'Anjou,  
France  
+33 (0)2 41 21 24 24

## Overrunning Clutches

### Formsprag Clutch

*Overrunning Clutches  
and Holdbacks*

Warren, MI - USA  
1-800-348-0881 – Press #1

For application assistance:  
1-800-348-0881 – Press #2

### Marland Clutch

*Roller Ramp and Sprag Type  
Overrunning Clutches  
and Backstops*

Warren, MI - USA  
1-800-216-3515

### Stieber Clutch

*Overrunning Clutches  
and Holdbacks*

Heidelberg, Germany  
+49 (0) 6221-30470

For information concerning our  
sales offices in Asia Pacific  
check our website  
[www.altramotion.com.cn](http://www.altramotion.com.cn)



[www.marland.com](http://www.marland.com)

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