

with **14"** HD Clutches

North American Clutch & Driveline

Shipping Address:
10901 North Second St.
Machesney Park, IL 61115

Mailing Address:
P.O. Box 15130
Rockford, IL 61132-5130

Phone:
(815) 282-7960
(800) 383-9204

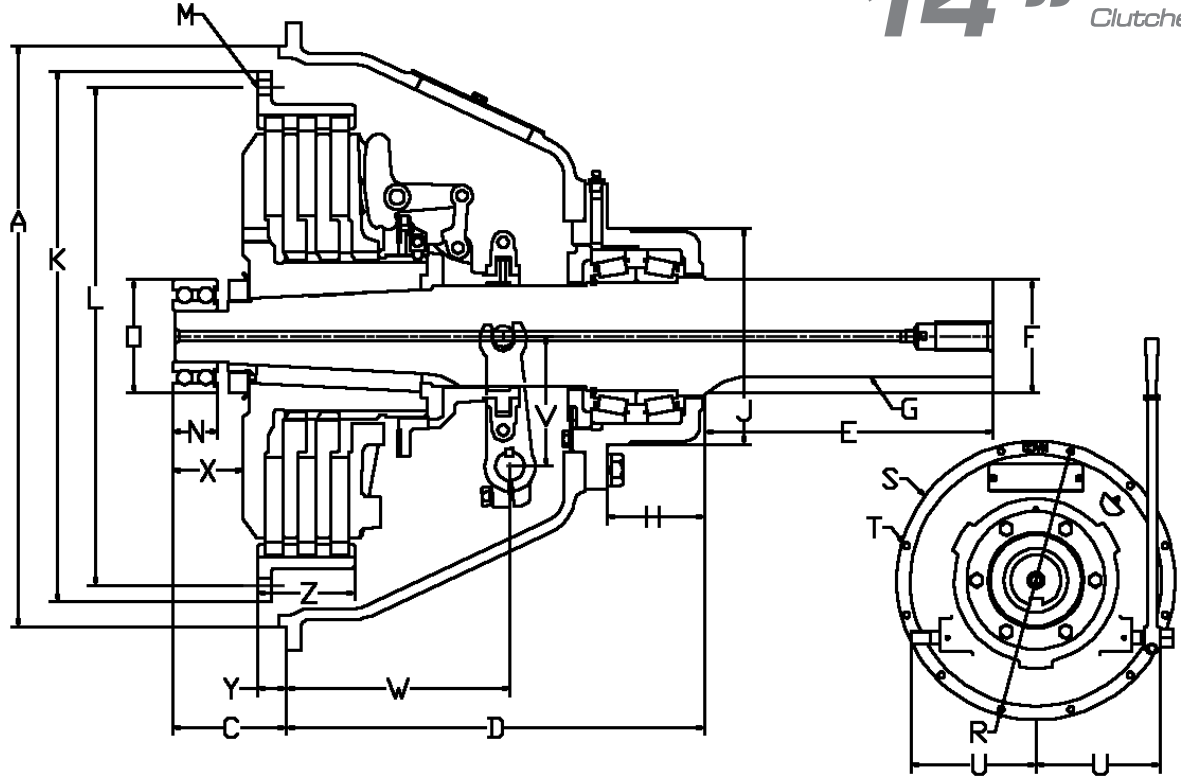
Fax:
(815) 282-9160

Email:
sales@naclutch.com

www.naclutch.com

All dimensions are in inches unless otherwise specified. Listing subject to change without notice. * The figure listed below is torque capacity of the clutch. To determine the actual clutch torque capacity required for any given application the torque service factor must be considered. See the chart and formula on the back side of this sheet to calculate the proper clutch torque capacity for your application or contact your NACD sales representative for recommendations. The illustrations are shown for identification of dimensions only. They are not intended to necessarily depict the actual size, exact shape or internal configuration of the part numbers listed. ** Other pilot bearing sizes may be available.

Important Notice: A support plate for three plate (TP) 14" PTO's is required in side load and in line applications.

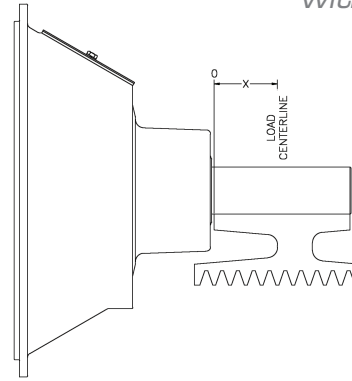


Side Load Applications

PTO Part Number	Ball or Tapered Roller Bearing Type	Max RPM	Model			Application (in-line or side load)	Type of Facing	Type Release Bearing	Clutch Torque Capacity lb. Ft. *	A	C	D	Shaft			
			SAE Hsg Size	Clutch Size	Qty of Facings								E Length	F Dia +.000-.001	G Keyway	H
411058AM	Tapered	2200	1	14	1	Side Load	Organic	Bronze	1050	20.125	3.94	12.12	8.50	3.000	3/4 x 3/8	3.75
425393AM	Tapered	2200	1	14	1	Side Load	Feramic	Bronze	1345	20.125	3.94	12.12	8.50	3.000	3/4 x 3/8	3.75
437430AM	Tapered	2200	1	14	1	Side Load	Organic	Ball	1050	20.125	3.94	12.12	8.50	3.000	3/4 x 3/8	3.75
411060AM	Tapered	2200	1	14	2	Side Load	Organic	Bronze	2100	20.125	3.94	13.50	10.00	3.500	7/8 x 7/16	3.75
427491AM	Tapered	2200	1	14	2	Side Load	Feramic	Bronze	2690	20.125	3.94	13.50	10.00	3.500	7/8 x 7/16	3.75
437440AM	Tapered	2200	1	14	2	Side Load	Organic	Ball	2100	20.125	3.94	13.50	10.00	3.500	7/8 x 7/16	3.75
434764AM	Tapered	2200	1	14	3	Side Load	Organic	Bronze	3150	20.125	3.94	14.50	10.00	3.938	1 x 1/2	3.38
433853AM	Tapered	2200	1	14	3	Side Load	Feramic	Bronze	4035	20.125	3.94	14.50	10.00	3.938	1 x 1/2	3.38
437455AM	Tapered	2200	1	14	3	Side Load	Organic	Ball	3150	20.125	3.94	14.50	10.00	3.938	1 x 1/2	3.38
411074AM	Tapered	2200	1	14	3	Side Load	Organic	Bronze	3150	20.125	3.94	14.50	10.00	3.938	1 x 1/2	3.38
427493AM	Tapered	2200	1	14	3	Side Load	Feramic	Bronze	4035	20.125	3.94	14.50	10.00	3.938	1 x 1/2	3.38
437450AM	Tapered	2200	1	14	3	Side Load	Organic	Ball	3150	20.125	3.94	14.50	10.00	3.938	1 x 1/2	3.38

PTO Part Number	J	K	L	M (holes)		N	O See Note**	R	S	T (holes)		U	V	W	X	Y	Z
				Qty	Dia					Qty	Dia						
411058AM	6.75	18.375	17.250	8	.531	1.3750	3.1496	20.875	21.75	12	.469	9.75	4.00	6.00	2.19	1.00	1.12
425393AM	6.75	18.375	17.250	8	.531	1.3750	3.1496	20.875	21.75	12	.469	9.75	4.00	6.00	2.19	1.00	1.12
437430AM	6.75	18.375	17.250	8	.531	1.3750	3.1496	20.875	21.75	12	.469	9.75	4.00	6.00	2.19	1.00	1.12
411060AM	7.62	18.375	17.250	8	.531	1.3750	3.1496	20.875	21.75	12	.469	9.75	4.00	7.00	2.19	1.00	2.38
427491AM	7.62	18.375	17.250	8	.531	1.3750	3.1496	20.875	21.75	12	.469	9.75	4.00	7.00	2.19	1.00	2.38
437440AM	7.62	18.375	17.250	8	.531	1.3750	3.1496	20.875	21.75	12	.469	9.75	4.00	7.00	2.19	1.00	2.38
434764AM	7.50	18.375	17.250	8	.531	1.3750	3.1496	20.875	21.75	12	.469	9.75	4.50	7.75	2.50	1.00	3.38
433853AM	7.50	18.375	17.250	8	.531	1.3750	3.1496	20.875	21.75	12	.469	9.75	4.50	7.75	2.50	1.00	3.38
437455AM	7.50	18.375	17.250	8	.531	1.3750	3.1496	20.875	21.75	12	.469	9.75	4.50	7.75	2.50	1.00	3.38
411074AM	7.50	18.375	17.250	8	.531	1.5625	3.937	20.875	21.75	12	.469	9.75	4.50	7.75	2.50	1.00	3.38
427493AM	7.50	18.375	17.250	8	.531	1.5625	3.937	20.875	21.75	12	.469	9.75	4.50	7.75	2.50	1.00	3.38
437450AM	7.50	18.375	17.250	8	.531	1.5625	3.937	20.875	21.75	12	.469	9.75	4.50	7.75	2.50	1.00	3.38

with **14" HD** Clutches



Allowable Side Load Pulls:

The following formula can be used to calculate applied side load. Loads are calculated on proper tensioning of belts. If belts are tightened excessively, the resulting side load can exceed these limits

$$L = \frac{126000 \times \text{H.P.}}{N \times D} \times F \times A$$

L = Actual Applied Load (lbs.)

N = Shaft Speed (rev./min.)

D = Pitch Diameter of Sheaves, etc. (in.)

F = Load Factor (see below)

- 1.0 for chain
- 2.5 for V belt drive
- 3.5 for flat belt drive

A = 1.0 for low & moderate duty drives

1.4 for severe duty shock loads or large inertia loads (reciprocating compressors, crusher, chippers, planers, etc.)

Required Clutch Torque Capacity Calculation:

Required Clutch Torque = Maximum Engine Torque x Service Factor

Blower or Vacuum

- Centrifugal with free flow of air 1.7
- With high start-up inertia or subject to choking of air supply 4.0

Compressors

- Reciprocating, 1 or 2 cylinders 4.0
- Reciprocating, 3 or more cylinders 2.5
- Roto screw or turbine 2.0

Conveyor

- Fed uniformly 1.5
- Not fed uniformly 2.0
- Reciprocating 3.0

Drills 2.0

Generator 2.0

Pump

- Centrifugal or turbine 1.5
- Dredge 2.0
- Mud or reciprocating 3.0

Rock Crusher, Hammer Mill 3.0

Snow Blower 2.0

Wood Chipper, Saw Mill 3.0

Ratings: Shafts, bearings and clutch capacities are rated on a conservative basis. For unusually heavy starting loads, frequent engagement service, or if prime mover is engine of less than 4 cylinders, consult our sales representatives for recommendations. Extremely low speed engines require special consideration.

Power Take-Off Part Numbers **437430AM, 411058AM, 425393AM**

RPM	X" Distance							
	0	1"	2"	3"	4"	5"	6"	7"
1600	4370	3046	2337	1896	1595	1377	1211	1081
1900	4126	2876	2207	1791	1506	1300	1143	1021
2200	3930	2739	2102	1705	1435	1238	1089	972

Power Take-Off Part Numbers **411060AM, 437440AM, 427491AM**

RPM	X" Distance							
	0	1"	2"	3"	4"	5"	6"	7"
1600	4386	3133	2437	1994	1687	1462	1290	1154
1900	4142	2959	2301	1883	1593	1381	1218	1090
2200	3944	2817	2191	1793	1517	1315	1160	1038

Power Take-Off Part Numbers **411074AM, 427493AM, 437450AM**

RPM	X" Distance							
	0	1"	2"	3"	4"	5"	6"	7"
1600	10950	10362	8334	6765	5693	4914	4323	3858
1900	10341	9785	7870	6388	5376	4640	4082	3643
2200	9847	9318	7495	6083	5119	4419	3887	3470

Power Take-Off Part Numbers **433853AM, 434764AM, 437455AM**

RPM	X" Distance							
	0	1"	2"	3"	4"	5"	6"	7"
1600	10000	7000	5400	4400	3700	3200	2800	2500
1900	9400	6600	5100	4150	3500	3025	2650	2375
2200	8900	6200	4800	3900	3300	2850	2500	2250