

North American Clutch & Driveline

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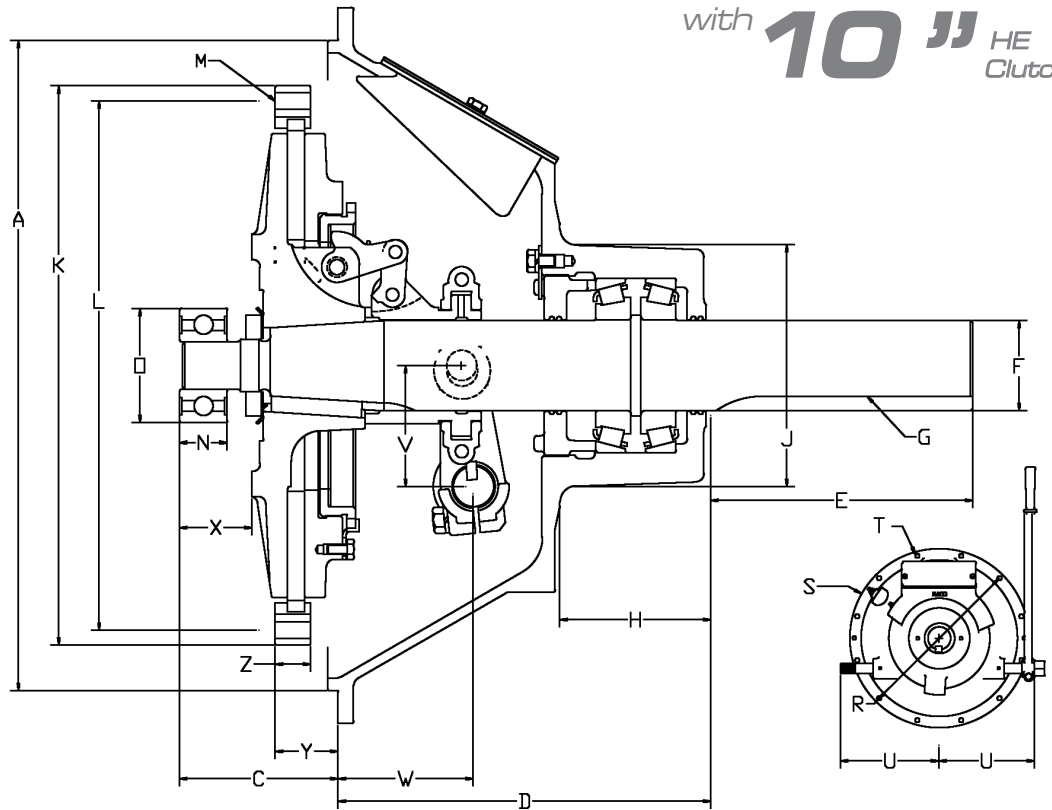
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All dimensions are in inches unless otherwise specified. Listing subject to change without notice. * The figure listed below is torque capacity of the clutch. To determine the actual clutch torque capacity required for any given application the torque 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.



PTO Part Number	Ball or Tapered Roller Brng Type	Model			Application (in-line or side loaded)	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
411256AM	Tapered	4	10"	1	Both	Organic	Bronze	460	14.25	3.94	8.62	5.50	2.250	5/8 x 5/16
411256AM2	Tapered	4	10"	1	Both	Organic	Bronze	460	14.25	3.94	8.62	4.14	2.250	5/8 x 5/16
411256AM3	Tapered	4	10"	1	Both	Organic	Bronze	460	14.25	3.94	8.62	5.50	2.250	5/8 x 5/16
411256AM4	Tapered	4	10"	1	Both	Organic	Bronze	460	14.25	3.94	8.62	3.13	2.250	5/8 x 5/16
411256AM5	Tapered	4	10"	1	Both	Organic	Bronze	460	14.25	3.94	8.62	5.50	2.250	5/8 x 5/16
411256AM7	Tapered	4	10"	1	Both	Organic	Bronze	460	14.25	3.94	8.62	5.50	2.250	5/8 x 5/16
434630AM1	Tapered	4	10"	1	Both	Organic	Ball	460	14.25	3.94	8.62	5.50	2.250	5/8 x 5/16
434630AM2	Tapered	4	10"	1	Both	Organic	Ball	460	14.25	3.94	8.62	5.50	2.250	5/8 x 5/16
434630AM3	Tapered	4	10"	1	Both	Organic	Ball	460	14.25	3.94	8.62	4.14	2.250	5/8 x 5/16
436003AM	Tapered	3	10"	1	Both	Organic	Bronze	460	16.125	3.94	9.25	5.50	2.250	5/8 x 5/16
436003AM1	Tapered	3	10"	1	Both	Organic	Bronze	460	16.125	3.94	9.25	5.50	2.250	5/8 x 5/16
434240AM	Tapered	3	10"	1	Both	Organic	Ball	460	16.125	3.94	9.25	5.50	2.250	5/8 x 5/16
434240AM1	Tapered	3	10"	1	Both	Organic	Ball	460	16.125	3.94	9.25	5.50	2.250	5/8 x 5/16
431271AM	Tapered	2	10"	1	Both	Organic	Bronze	460	17.625	3.94	9.25	5.50	2.250	5/8 x 5/16

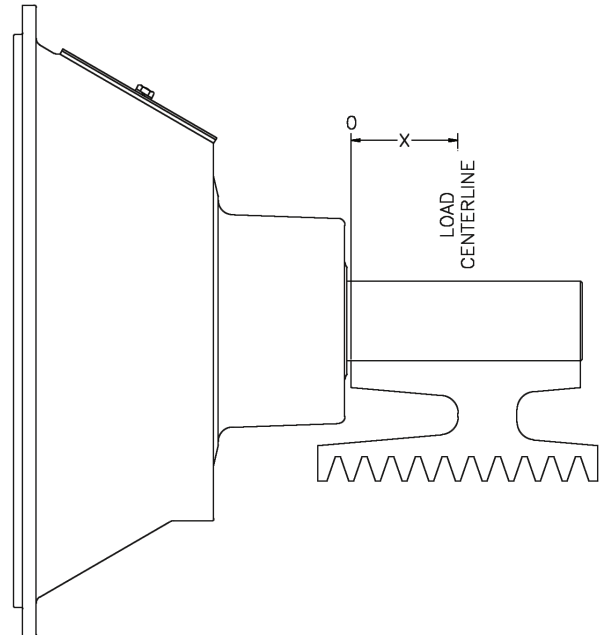
PTO Part Number	H	J	K	L	M (holes)		N	O see note**	R	S	T (holes)		U	V	W	X	Y	Z
					Qty.	Dia.					Qty.	Dia.						
411256AM	3.75	6.00	12.375	11.625	8	.406	1.1875	2.8346	15.000	15.88	12	.433	7.75	3.00	3.25	1.44	2.12	.88
411256AM2	3.75	6.00	12.375	11.625	8	.406	1.1875	2.8346	15.000	15.88	12	.433	7.75	3.00	3.25	1.44	2.12	.88
411256AM3	3.75	6.00	12.375	11.625	8	.406	.937	2.440	15.000	15.88	12	.433	7.75	3.00	3.25	1.44	2.12	.88
411256AM4	3.75	6.00	12.375	11.625	8	.406	1.1875	2.8346	15.000	15.88	12	.433	7.75	3.00	3.25	1.44	2.12	.88
411256AM5	3.75	6.00	12.375	11.625	8	.406	1.024	2.165	15.000	15.88	12	.433	7.75	3.00	3.25	1.44	2.12	.88
411256AM7	3.75	6.00	12.375	11.625	8	.406	.937	2.440	15.000	15.88	12	.433	7.75	3.00	3.25	1.44	2.12	.88
434630AM1	3.75	6.00	12.375	11.625	8	.406	1.1875	2.8346	15.000	15.88	12	.433	7.75	3.00	3.25	1.44	2.12	.88
434630AM2	3.75	6.00	12.375	11.625	8	.406	.937	2.440	15.000	15.88	12	.433	7.75	3.00	3.25	1.44	2.12	.88
434630AM3	3.75	6.00	12.375	11.625	8	.406	1.1875	2.8346	15.000	15.88	12	.433	7.75	3.00	3.25	1.44	2.12	.88
436003AM	3.75	6.00	12.375	11.625	8	.406	1.1875	2.8346	16.875	17.75	12	.433	9.75	3.00	3.35	1.44	2.12	.88
436003AM1	3.75	6.00	12.375	11.625	8	.406	.937	2.440	16.875	17.75	12	.433	9.75	3.00	3.35	1.44	2.12	.88
434240AM	3.75	6.00	12.375	11.625	8	.406	1.1875	2.8346	16.875	17.75	12	.433	9.75	3.00	3.35	1.44	2.12	.88
434240AM1	3.75	6.00	12.375	11.625	8	.406	.937	2.440	16.875	17.75	12	.433	9.75	3.00	3.35	1.44	2.12	.88
431271AM	3.75	6.00	12.375	11.625	8	.406	1.1875	2.8346	18.375	19.25	12	.433	9.75	3.00	3.25	1.81	2.12	.88

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.

411256AM3, 411256AM7, 434630AM2,
436003AM1, 434240AM1

Power Take-Off Part Numbers

RPM	X" Distance					
	0	1"	2"	3"	4"	5"
1600	2900	2200	1650	1300	1075	925
1900	2775	2100	1575	1240	1025	875
2200	2650	2000	1500	1180	975	825
2500	2525	1900	1425	1120	925	775
2800	2400	1800	1350	1060	875	725

411256AM5

Power Take-Off Part Numbers

RPM	X" Distance			
	1"	2"	3"	4"
1600	2150	1575	1250	1025
1900	2050	1500	1175	975
2200	1950	1425	1100	925
2500	1850	1350	1025	875
2800	1750	1275	950	825