

North American Clutch & Driveline

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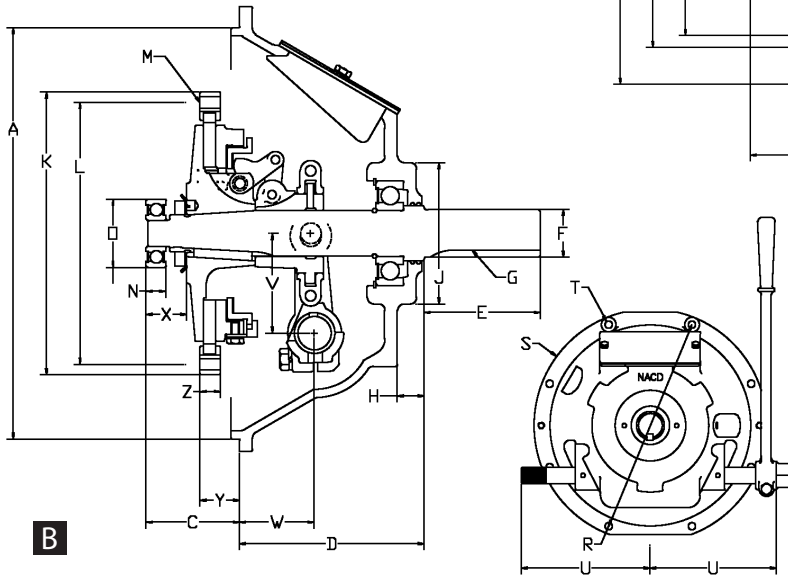
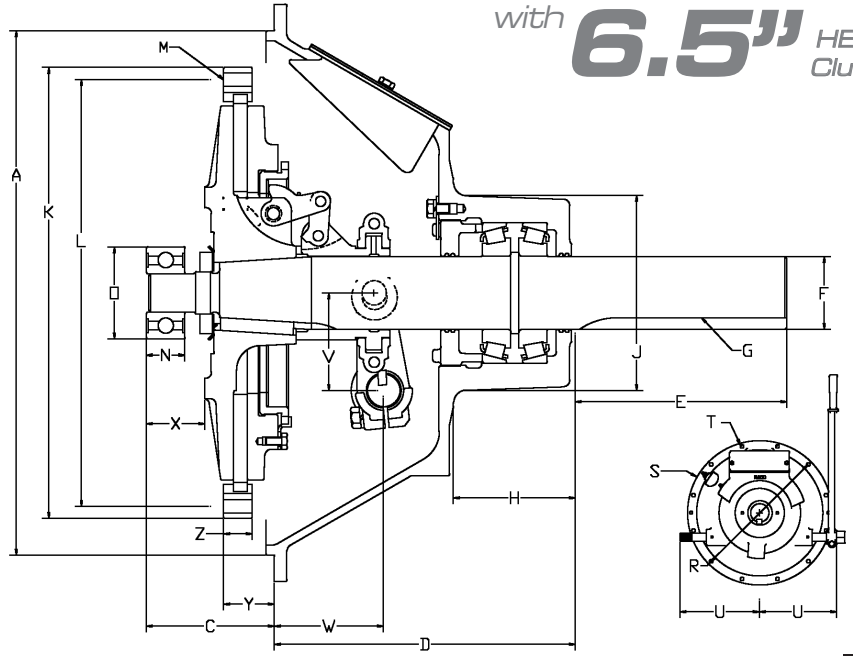
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with **6.5" HE**
Clutches



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. ** Other pilot bearing sizes are available. 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.

PTO Part Number	Illustration Reference	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
411319AM	B	Ball	6	6.5"	1	Inline/Limited	Organic	Bronze	125	10.500	2.81	5.56	3.50	1.437	3/8 x 3/16
439800AM	B	Ball	6	6.5"	1	Inline/Limited	Organic	Ball	125	10.500	2.81	5.56	3.50	1.437	3/8 x 3/16
411294AM	B	Ball	5	6.5"	1	Inline/Limited	Organic	Bronze	125	12.375	2.81	5.56	3.50	1.437	3/8 x 3/16
411294T	A	Tapered	5	6.5"	1	Both	Organic	Bronze	125	12.375	2.81	7.06	3.50	1.437	3/8 x 3/16
411294T750	A	Tapered	5	6.5"	1	Both	Organic	Bronze	125	12.375	2.81	7.06	3.50	1.750	7/16 x 7/32
434192AM	B	Ball	5	6.5"	1	Inline/Limited	Organic	Ball	125	12.375	2.81	5.56	3.50	1.437	3/8 x 3/16
434198AM	A	Tapered	5	6.5"	1	Both	Organic	Ball	125	12.375	2.81	7.06	3.50	1.437	3/8 x 3/16
411236AM	B	Ball	4	6.5"	1	Inline/Limited	Organic	Bronze	125	14.250	2.81	5.56	3.50	1.437	3/8 x 3/16
437425AM	A	Tapered	4	6.5"	1	Both	Organic	Ball	125	14.250	2.81	7.06	3.50	1.437	3/8 x 3/16

H	J	K	L	M (holes)		N	O see note**	R	S	T (holes)		U	V	W	X	Y	Z
				Qty.	Dia.					Qty.	Dia.						
.81	4.25	8.50	7.875	6	.344	.5906	2.0472	11.250	12.12	8	.406	7.75	3.00	2.25	1.22	1.19	.62
.81	4.25	8.50	7.875	6	.344	.5906	2.0472	11.250	12.12	8	.406	7.75	3.00	2.25	1.22	1.19	.62
.81	4.25	8.50	7.875	6	.344	.5906	2.0472	13.125	14.00	8	.406	7.75	3.00	2.25	1.22	1.19	.62
2.31	4.00	8.50	7.875	6	.344	.5906	2.0472	13.125	14.00	8	.406	7.75	3.00	2.25	1.22	1.19	.62
2.31	4.00	8.50	7.875	6	.344	.5906	2.0472	13.125	14.00	8	.406	7.75	3.00	2.25	1.22	1.19	.62
.81	4.25	8.50	7.875	6	.344	.5906	2.0472	13.125	14.00	8	.406	7.75	3.00	2.25	1.22	1.19	.62
2.31	4.00	8.50	7.875	6	.344	.5906	2.0472	13.125	14.00	8	.406	7.75	3.00	2.25	1.22	1.19	.62
.81	4.25	8.50	7.875	6	.344	.5906	2.0472	15.00	15.88	12	.433	7.75	3.00	2.25	1.22	1.19	.62
2.31	4.00	8.50	7.875	6	.344	.5906	2.0472	15.00	15.88	12	.433	7.75	3.00	2.25	1.22	1.19	.62

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)

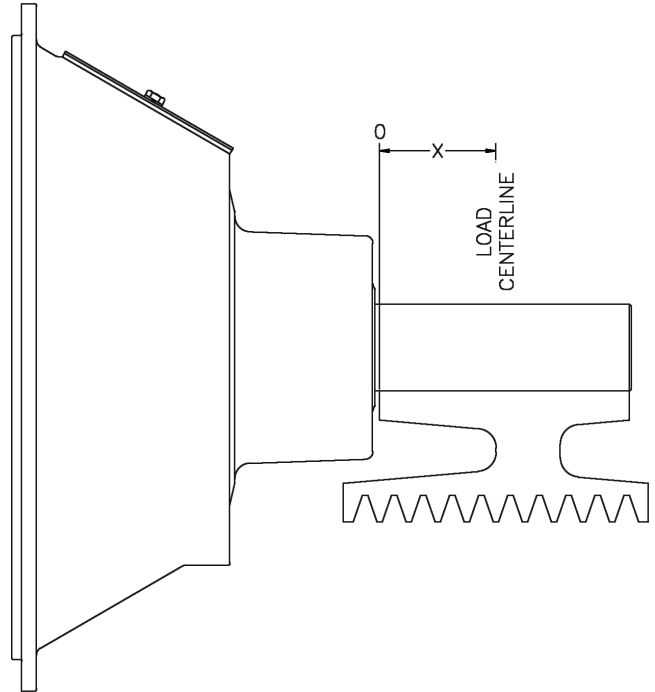
1.0 for chain

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		411236AM, 411294AM 434192AM, 411319AM, 439800AM			
RPM	X" Distance				
	0	1"	2"	3"	
1600	904	804	724	658	
1900	854	759	683	621	
2200	813	723	651	592	
2500	779	693	624	567	
2800	750	667	601	546	
3100	725	645	581	528	

Power Take-Off Part Numbers		411294T, 411294T750 434198AM, 437425AM			
RPM	X" Distance				
	0	1"	2"	3"	
1600	1350	1225	1030	820	
1900	1300	1175	995	790	
2200	1250	1125	960	760	
2500	1200	1075	925	730	
2800	1150	1025	890	700	
3100	1100	975	855	670	