DPC SERIES DUAL PLATE CLUTCHES

This Series, specified by component, allows you to custom design for specific application requirements:

- Static Torque capacity up to 36,000 In. Lbs. @ 80 psi
- Maximum Operating Speed up to 2200 rpm
- Thermal Horsepower values of 3.3 to 9.0 at rated speeds
- Components combine in a variety of options to fit almost any need
- Choose from Thru-Shaft or Shaft-End Mounting
- Choose between Sheave or Pilot style configurations
- Rotary Air Union is included with each Clutch Assembly.

With the DPC Model Series, tough applications are made easy. Each of the 4 Models and their many options are detailed on the next few pages.

The DPC Series Clutches are designed for applications involving high inertia starts and stops. The Peak Input Rate may be the limiting factor in high inertia starts or stops, even though the Heat Sink Capacity is sufficient. The Peak Input Rate capacity is the rate at which the clutch absorbs heat at the friction interface during the acceleration period, while the interfaces are slipping or until the load and clutch are operating at the same speed. See page 368 in the Engineering Data Section for information explaining how to calculate the Peak Input Rate and how to avoid potential problems.

How to Specify and Order DPC Clutches:

1. Determine if you require Shaft-End Mounting or Thru-Shaft Mounting;
2. Determine if you require a Pilot Mount or Sheave Mount configuration;
3. Determine which bore size you will need;
4. Order each component individually, based upon your requirements.

Motor Frame, Shaft Diameters & Lengths

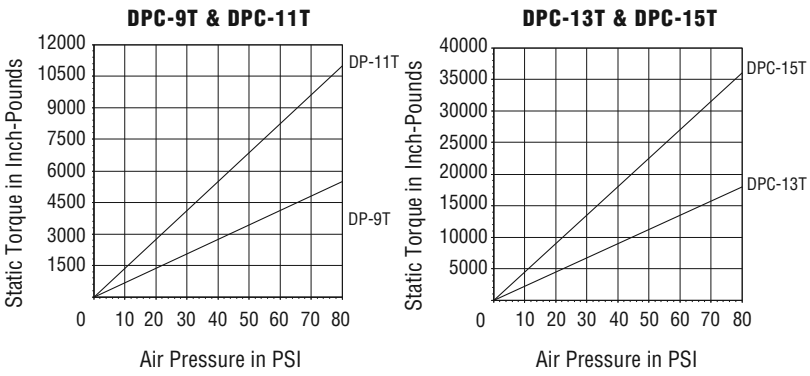
This chart can be used for quick selection of many criteria.
If you are using a standard motor frame and are within the rpm and horsepower requirements, the chart indicates a clutch and shaft to use.
If you know the rpm, horsepower and desired clutch, the chart will indicate a standard motor frame and shaft to use.

HORSEPOWER	600RPM	900RPM	1200RPM	1800RPM
50	**DPC13T**	**DPC11T**	**DPC9T**	**DPC9T**
Motor Frame	445T	404T	365T	326T
Shaft DIA./LGTH	3.375 / 8.25	2.875 / 7.0	2.375 / 5.625	2.125 / 5.0
60	--	**DPC11T**	**DPC11T**	**DPC9T**
Motor Frame	--	405T	404T	364TS, 364T
Shaft DIA./LGTH	--	2.875 / 7.0	2.875 / 7.0	2.375 / 5.625
75	**DPC13T**	**DPC13T**	**DPC11T**	**DPC9T**
Motor Frame	D5005	444T	405T	365TS, 365T
Shaft DIA./LGTH	3.5/ 10.25	3.375 / 8.25	2.875 / 7.0	2.375 / 5.625
100	**DPC15T**	**DCP13T**	**DPC13T**	**DPC11T**
Motor Frame	D5008	445T	444T	405TS, 404T
Shaft DIA./LGTH	4.0 / 11.75	3.375 / 8.25	3.375 / 8.25	2.875 / 7.0
125	--	**DPC13T**	**DPC13T**	--
Motor Frame	--	D5005	444T	--
Shaft DIA./LGTH	--	3.5/ 10.25	3.375 / 8.25	--
150	--	**DPC15T**	**DPC13T**	--
Motor Frame	--	D5005	445T, D5005	--
Shaft DIA./LGTH	--	3.5/ 10.25	3.5/ 10.25	--

Clutch Application Data

MODEL	DPC-9T	DPC-11T
Peak Input Rate	50 hp	84 hp
Effective Friction Areas	55 in^2	93 in^2
MODEL	**DPC-13T**	**DPC-15T**
Peak Input Rate	131 hp	149 hp
Effective Friction Areas	145 in^2	166 in^2

Torque Vs. Air Pressure



NOTE: Dynamic torque is approximately 85% of static torque.

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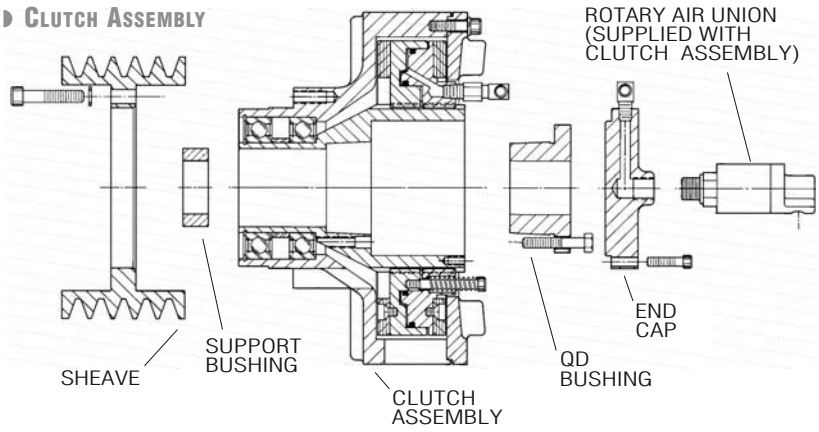
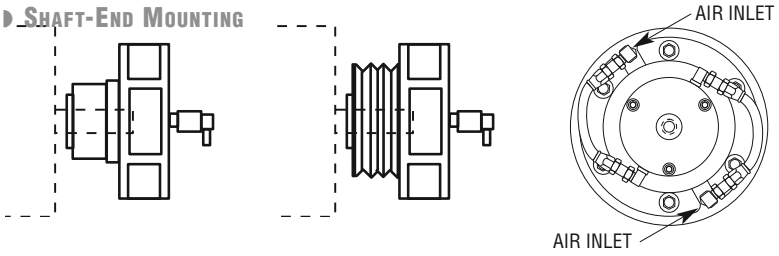
Clutch Assembly



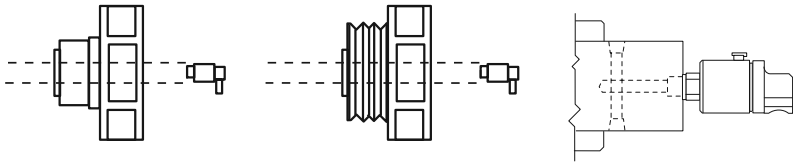
Shaft-End Mounting



Air Inlet Connection:

1. Attach the End Cap to the end of the Hub with three cap screws.
2. Install the Rotary Air union and elbow fittings in the End Cap.
3. Connect the cylinder hoses to the elbow fittings.
4. Use the flexible hose (supplied) to connect air supply to the Rotary Air Union (do not use rigid pipe or tubing for this connection).
5. Make sure that of these hoses do not interfere with the rotating parts of the unit.

Thru-Shaft Mounting



Air Inlet Connection:

1. Drill a 0.375 inch diameter hole in the center of the shaft, long enough to reach the air outlets.
2. Tap drill the air outlet holes straight through the shaft, intersecting the 0.375 diameter hole, and tap the 0.125-27 NPT on both ends.
3. The air outlet holes should be located 0.375 of an inch from the end of the Hub.
4. Tap a .625-18 inch hole, 0.625 inches deep in the end of the shaft for the Rotary Air Union.
5. Install the two elbow fittings in the air outlet holes and connect the cylinder hoses to them.
6. Install the Rotary Air Union in the end of the shaft and use the flexible hose (supplied) to connect the air supply to the shaft (do not use rigid pipe or tubing for this connection).

DPC Clutches

Shown are the typical components of a DPC Clutch:

- The Clutch Assembly comes with the Rotary Air Union
- Rotary Air Union, supplied with each clutch, is required for both Shaft-End and Thru Shaft mounting
- The optional End Cap is only required for Shaft-End Mounting
- The customer supplied QD Bushing is required for both Shaft-End and Thru-Shaft Mounting
- The Support Bushing is used whenever the shaft size is less than the maximum clutch bore.

Mounting/Air Inlet Connections

DPC Clutches are very flexible units because of their many mounting possibilities. Four of the more common applications are shown at left. Also refer to the Air Inlet Connection information (at left) for each mounting style.

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DPC-9T MODEL DUAL PLATE CLUTCH

This **Model**, specified by component, allows you to custom design for specific application requirements:

- Static Torque capacity up to 5500 In. Lbs. @ 80 psi
- Maximum Operating Speed up to 2200 rpm
- Thermal Horsepower ratings up to 3.3 @ 2200 rpm
- **Pilot Mount** clutch assembly with standard support bushing bore of 2.375 inches
- **Sheave** options: 5-"5V" or 4-"C" Groove
- Support Bushings provide 6 additional bore sizes ranging from 1.87 to 2.125 inches
- Heat Sink capacity of 220,000 Ft. Lbs.
- 8.25 inch hose included
- Rotary Air Union is supplied with the clutch assembly

Review the information on this and the next page to determine the required components to build your clutch.

REQUIRED COMPONENTS:

Shaft-End Mounting	**Thru-Shaft Mounting**
1 Clutch Assembly	1 Clutch Assembly
1 End Cap	1 QD Bushing
1 QD Bushing	

(QD Bushing customer furnished)

OPTIONAL COMPONENTS:

Shaft-End Mounting	**Thru-Shaft Mounting**
1 Support Bushing	1 Support Bushing
1 Sheave	1 Sheave

DPC-9T, Dual Plate Clutch

Clutch Component	Product Number	Support Bushing Bore (O.D.)(In)	Shaft Insertion MIN.	Shaft Insertion MAX.	Shipping Wt. (Lbs)
Shaft-End Mounting (1 of each required)					
Clutch Assembly	960200	2.375	4.69	6.57	64
End Cap	960700	--	--	--	3
QD Bushing	Customer Supplied	SK Bore Range = 0.500 - 2.375 inches			
Thru-Shaft Mounting (1 of each required)					
Clutch Assembly	960200	--	--	--	64
QD Bushing	Customer Supplied	SK Bore Range = 0.500 - 2.375 inches			

Support Bushing/Bore Options

Support Bushings are used to reduce the clutch bore for the driven shaft.

Clutch Component	Product Number	Reduce Bore Size to/ (In)	Shipping Wt. (Lbs)
Support Bushing	960419	1.187	1
Support Bushing	960423	1.437	1
Support Bushing	960427	1.687	1
Support Bushing	960430	1.875	1
Support Bushing	960431	1.937	1
Support Bushing	960434	2.125	1
Bushing-Blank/No Bore	960400	1.131 ID MIN.	1

Sheave Options

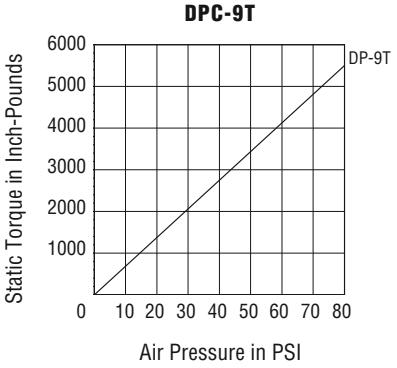
Clutch Component	Product Number	Type of Sheave Groove	Shaft Insertion MIN.	Shaft Insertion MAX.	Shipping Wt. (Lbs)
Sheave, "5V"	956700	8.0 OD, 5-"5V"	5.32	7.20	16
Sheave, "4C"	960600	9.0, OD, 4 "C"	5.51	7.39	22

Pulleys, Sprockets, Gears

These can be attached to the clutch for thru-shaft applications. Tapped holes are provided for ease of mounting. Nexen does not supply these items.

For minimum sprocket requirements, see page 369.

Torque Vs. Air Pressure



NOTE: Dynamic torque is approximately 85% of static torque.

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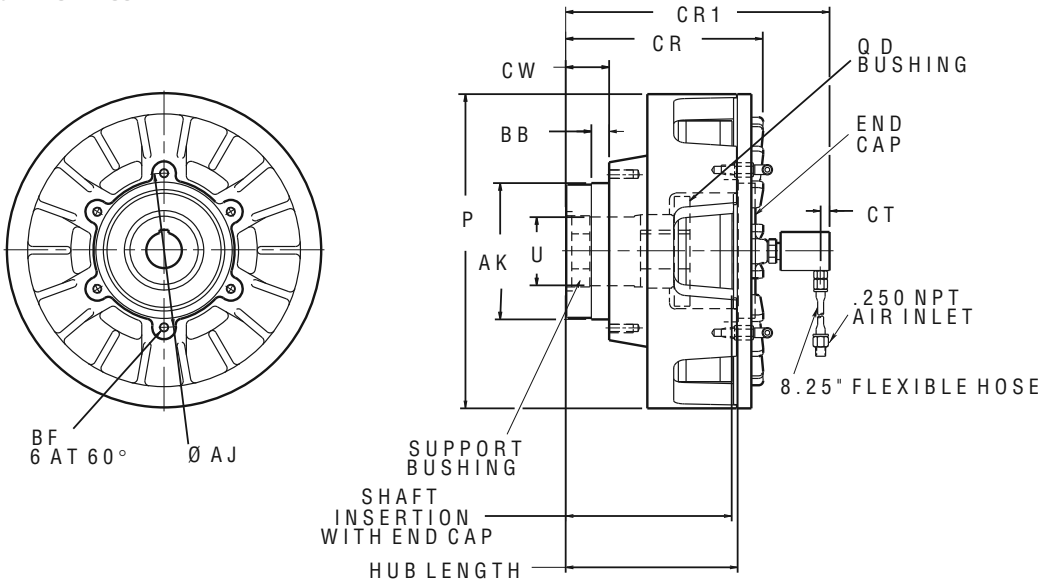
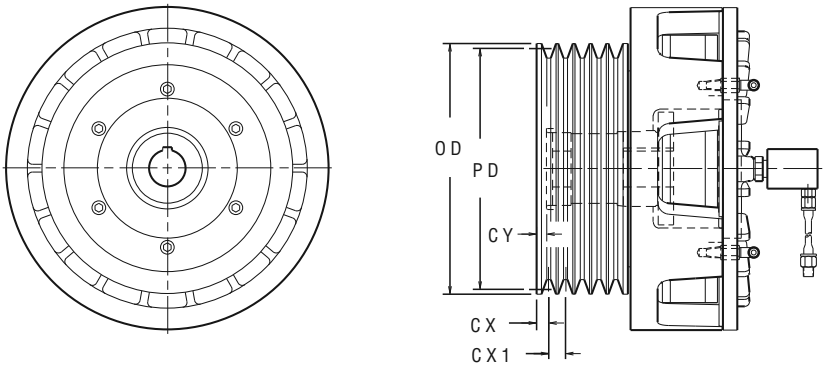
DPC-9T, DUAL PLATE CLUTCH - APPROXIMATE DIMENSIONS (INCHES)

Pilot Mount



CLUTCH PRODUCT NUMBER	AJ	AK ±.001	BB	BF	CR	CR1	CT	CW	P	HUB LENGTH	SHAFT INSERTION MIN.	SHAFT INSERTION MAX.	U +.002 -.000
960200	5.562	4.874	0.75	.375-16	7.42	10.76	0.38	1.62	10.75	6.82	4.69	6.57	2.375

Sheave Mount; Clutch and Sheave Combined



SHEAVE PRODUCT NUMBER	SHEAVE BELT	SHEAVE GROOVE	OD	PD	CX	CX1	CY
956700	"5V"	5	8.00	--	0.50	0.69	0.63
960600	"C"	4	9.00	8.60	0.56	1.00	0.82

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DPC-11T MODEL DUAL PLATE CLUTCH

This **Model**, specified by component, allows you to custom design for specific application requirements:

- Static Torque capacity up to 11,000 In. Lbs. @ 80 psi
- Maximum Operating Speed up to 1800 rpm
- Thermal Horsepower ratings up to 5.5 @ 1800 rpm
- **Pilot Mount** clutch assembly with standard support bushing bore of 2.875 inches
- **Sheave Mount** option in the 5-"5V" Groove design
- Support Bushings provide 7 additional bore sizes ranging from 1.188 to 2.500 inches
- Heat Sink capacity of 360,000 Ft. Lbs.
- Rotary Air Union is supplied with the clutch assembly
- 8.25 inch hose included.

Review the information on this and the next page to determine the required components to build your clutch.

REQUIRED COMPONENTS:

Shaft-End Mounting	Thru-Shaft Mounting
1 Clutch Assembly	1 Clutch Assembly
1 End Cap	1 QD Bushing
1 QD Bushing	

(QD Bushing customer furnished)

OPTIONAL COMPONENTS:

Shaft-End Mounting	Thru-Shaft Mounting
1 Support Bushing	1 Support Bushing
1 Sheave	1 Sheave

DPC-11T, Dual Plate Clutch

Clutch Component	Product Number	Support Bushing Bore (O.D.) (In)	Shaft Insertion MIN.	Shaft Insertion MAX.	Shipping Wt. (Lbs)
Shaft -End Mounting (1 of each required)					
Clutch Assembly	961200	2.875	5.16	7.00	100
End Cap	961700	--	--	--	3
QD Bushing	Customer Supplied	SF Bore Range = 1.500 - 2.875 inches			
Thru-Shaft Mounting (1 of each required)					
Clutch Assembly	961200	--	--	--	100
QD Bushing	Customer Supplied	SF Bore Range = 1.500 - 2.875 inches			

Support Bushing/ Bore Options

Support Bushings are used to reduce the clutch bore.

Clutch Component	Product Number	Reduce Bore Size to: (In)	Shipping Wt. (Lbs)
Support Bushing	961430	1.875	2
Support Bushing	961431	1.938	2
Support Bushing	961434	2.125	2
Support Bushing	961435	2.188	2
Support Bushing	961438	2.375	2
Support Bushing	961439	2.438	2
Support Bushing	961440	2.500	2
Bushing-Blank/No Bore	961400	1.375 ID MIN.	2

Sheave Options

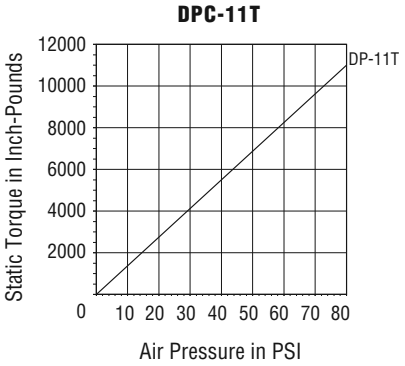
Clutch Component	Product Number	Type of Sheave Groove	Shaft Insertion MIN.	Shaft Insertion MAX.	Shipping Wt. (Lbs)
Sheave, "5V"	961600	10.3 OD, 5-"5V"	5.58	7.42	25

Pulleys, Sprockets, Gears

These can be attached to the clutch for thru-shaft applications. Tapped holes are provided for ease of mounting. Nexen does not supply these items.

For minimum sprocket requirements, see page 369.

Torque Vs. Air Pressure



NOTE: Dynamic torque is approximately 85% of static torque.

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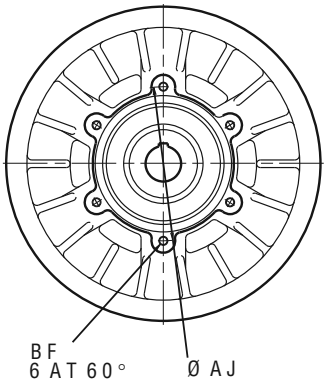
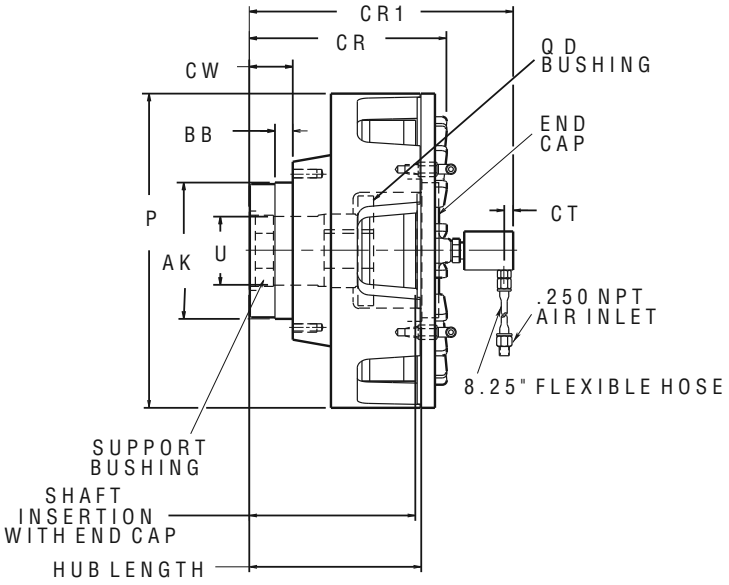
DPC-11T, DUAL PLATE CLUTCH - APPROXIMATE DIMENSIONS (INCHES)

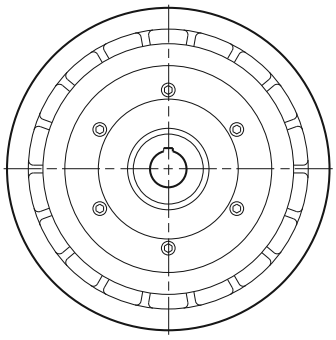
Pilot Mount

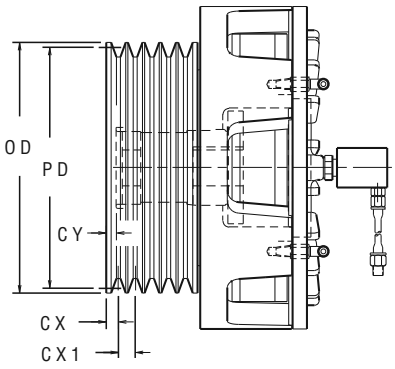




CLUTCH PRODUCT NUMBER	AJ	AK ±.001	BB	BF	CR	CR1	CT	CW	P	HUB LENGTH	SHAFT INSERTION MIN.	SHAFT INSERTION MAX.	U +.002 -.000
961200	6.500	5.748	0.75	.375-16	8.31	11.12	0.38	1.83	13.25	7.25	5.16	7.00	2.875

Sheave Mount; Clutch and Sheave Combined





SHEAVE PRODUCT NUMBER	SHEAVE BELT	SHEAVE GROOVE	OD	PD	CX	CX1	CY
961600	"5V"	5	10.30	--	0.50	0.69	0.42

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DPC-13T MODEL DUAL PLATE CLUTCH

This **Model**, specified by component, allows you to custom design tor specific application requirements:

- Static Torque capacity up to 18,000 In. Lbs. @ 80 psi
- Maximum Operating Speed up to 1200 rpm
- Thermal Horsepower ratings up to 8.0 @ 1200 rpm
- **Pilot Mount** clutch assembly wth standard support bushing bore of 3.500 inches
- **Sheave Mount** option in the 4-"8V" Groove design
- Support Bushings provide 3 additional bore sizes ranging from 2.938 to 3.438 inches
- Heat Sink capacity of 690,000 Ft. Lbs.
- Rotary Air Union is supplied with the clutch assembly
- 8.25 inch hose included.

Review the information on this and the next page to determine the required components to build your clutch.

REQUIRED COMPONENTS:

Shaft-End Mounting	**Thru-Shaft Mounting**
1 Clutch Assembly	1 Clutch Assembly
1 End Cap	1 QD Bushing
1 QD Bushing	

(QD Bushing customer furnished)

OPTIONAL COMPONENTS:

Shaft-End Mounting	**Thru-Shaft Mounting**
1 Support Bushing	1 Support Bushing
1 Sheave	1 Sheave

DPC-13T, Dual Plate Clutch

Clutch Component	Product Number	Support Bushing Bore (O.D.) (In)	Shaft Insertion MIN.	Shaft Insertion MAX.	Shipping Wt. (Lbs)
Shaft-End Mounting (1 of each required)					
Clutch Assembly	962200	3.500	7.00	9.25	200
End Cap	962700	--	--	--	7
QD Bushing	Customer Supplied	F Bore Range = 2.00 - 3.50 inches			
Thru-Shaft Mounting (1 of each required)					
Clutch Assembly	962200	--	--	--	200
QD Bushing	Customer Supplied	F Bore Range = 2.00 - 3.50 inches			

Support Bushing/Bore Options

Support Bushings are used to reduce the clutch bore.

Clutch Component	Product Number	Reduce Bore Size to/ (In)	Shipping Wt. (Lbs)
Support Bushing	962447	2.938	2
Support Bushing	962454	3.375	2
Support Bushing	962455	3.438	2
Bushing-Blank/No Bore	962400	2.25 ID MIN.	2

Sheave Options

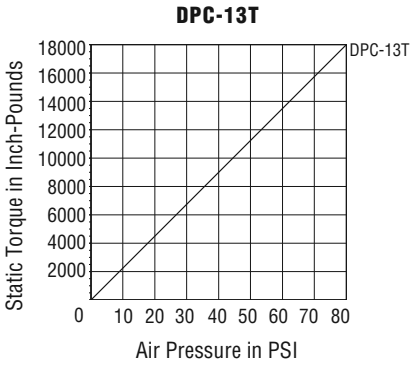
Clutch Component	Product Number	Type of Sheave Groove	Shaft Insertion MIN.	Shaft Insertion MAX.	Shipping Wt. (Lbs)
Sheave, "8V"	962600	15.0 OD, 4-"8V"	7.94	9.94	75

Pulleys, Sprockets, Gears

These can be attached to the clutch for thru-shaft applications. Tapped holes are provided for ease of mounting. Nexen does not supply these items.

For minimum sprocket requirements, see page 369.

Torque Vs. Air Pressure



NOTE: Dynamic torque is approximately 85% of static torque.

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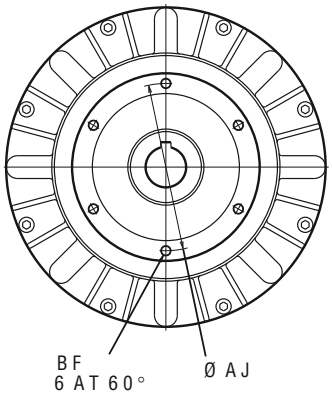
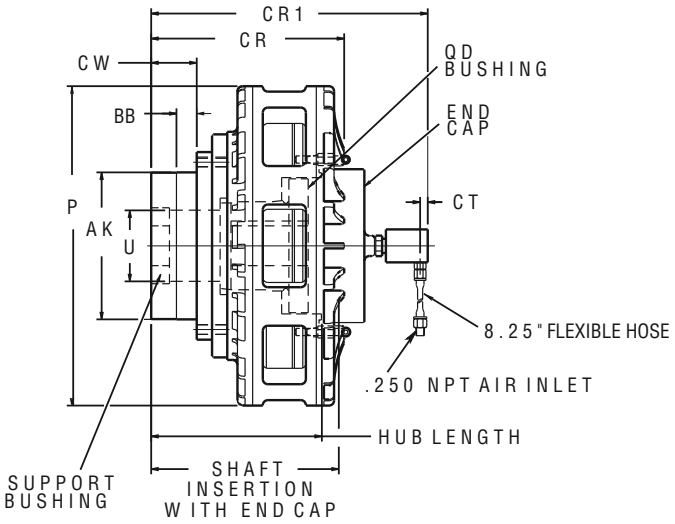
DPC-13T, DUAL PLATE CLUTCH - APPROXIMATE DIMENSIONS (INCHES)

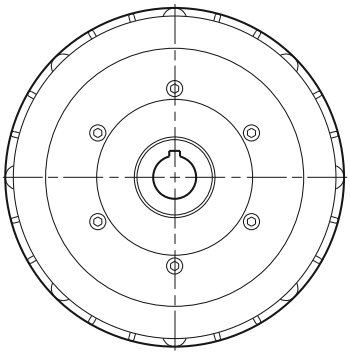
Pilot Mount

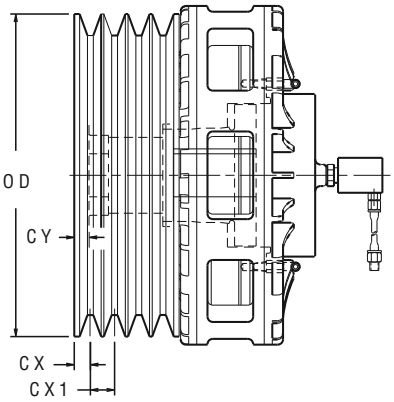




CLUTCH PRODUCT NUMBER	AJ	AK ±.001	BB	BF	CR	CR1	CT	CW	P	HUB LENGTH	SHAFT INSERTION MIN.	SHAFT INSERTION MAX.	U +.002 -.000
962200	8.250	7.248	1.00	.500-13	9.52	13.63	0.38	2.24	15.75	8.42	7.25	9.25	3.500

Sheave Mount; Clutch and Sheave Combined





SHEAVE PRODUCT NUMBER	SHEAVE BELT	SHEAVE GROOVE	OD	CX	CX1	CY
962600	"8V"	4	15.00	0.75	1.13	0.69

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DPC-15T MODEL DUAL PLATE CLUTCH

This **Model**, specified by component, allows you to custom design for specific application requirements:

- Static Torque capacity up to 36,000 In. Lbs. @ 80 psi
- Maximum Operating Speed up to 900 rpm
- Thermal Horsepower ratings up to 9.0 @ 900 rpm
- **Pilot Mount** clutch assembly with standard support bushing bore of 4.000 inches
- **Sheave Mount** option in the 4-"8V" Groove design
- Support Bushings provide 2 additional bore sizes ranging from 3.500 to 3.938 inches
- Heat Sink capacity of 820,000 Ft. Lbs.
- Rotary Air Union is supplied with the clutch assembly
- 8.25 inch hose included.

Review the information on this and the next page to determine the required components to build your clutch.

REQUIRED COMPONENTS:

Shaft-End Mounting	Thru-Shaft Mounting
1 Clutch Assembly	1 Clutch Assembly
1 End Cap	1 QD Bushing
1 QD Bushing	

(QD Bushing customer furnished)

OPTIONAL COMPONENTS:

Shaft-End Mounting	Thru-Shaft Mounting
1 Support Bushing	1 Support Bushing
1 Sheave	1 Sheave

DPC-15T, Dual Plate Clutch

Clutch Component	Product Number	Support Bushing Bore (O.D.) (In)	Shaft Insertion MIN.	Shaft Insertion MAX.	Shipping Wt. (Lbs)
Shaft-End Mounting (1 of each required)					
Clutch Assembly	963200	4.000	7.00	9.50	254
End Cap	963700	--	--	--	8
QD Bushing	Customer Supplied	J Bore Range = 2.125- 4.000 inches			
Thru-Shaft Mounting (1 of each required)					
Clutch Assembly	963200	--	--	--	254
QD Bushing	Customer Supplied	J Bore Range = 2.125-4.000 inches			

Support Bushing/Bore Options

Support Bushings are used to reduce the clutch bore.

Clutch Component	Product Number	Reduce Bore Size to/ (In)	Shipping Wt. (Lbs)
Support Bushing	963456	3.500	2
Support Bushing	963463	3.938	2
Bushing-Blank/No Bore	963400	3.00 ID MIN.	2

Sheave Options

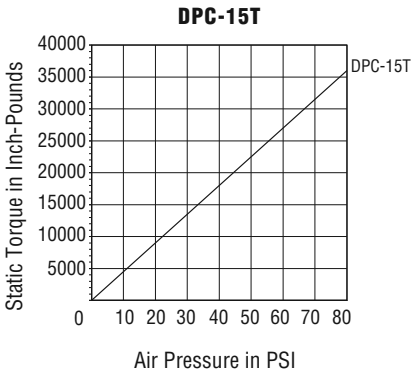
Clutch Component	Product Number	Type of Sheave Groove	Shaft Insertion MIN.	Shaft Insertion MAX.	Shipping Wt. (Lbs)
Sheave, "8V"	963600	18.0 OD, 4-"8V"	8.720	10.220	100

Pulleys, Sprockets, Gears

These can be attached to the clutch for thru-shaft applications. Tapped holes are provided for ease of mounting. Nexen does not supply these items.

For minimum sprocket requirements, see page 369.

Torque Vs. Air Pressure



NOTE: Dynamic torque is approximately 85% of static torque.

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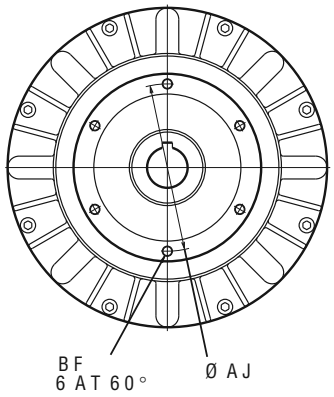
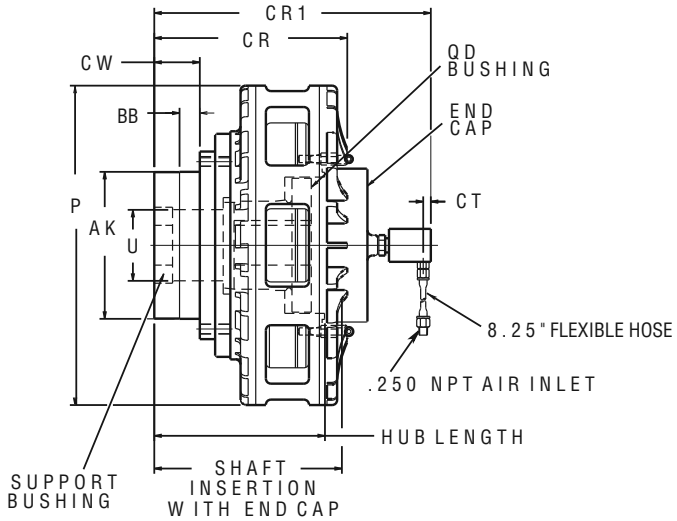
DPC-15T, DUAL PLATE CLUTCH - APPROXIMATE DIMENSIONS (INCHES)

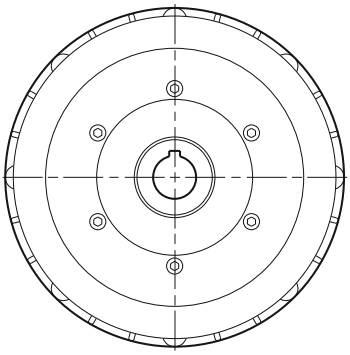
Pilot Mount

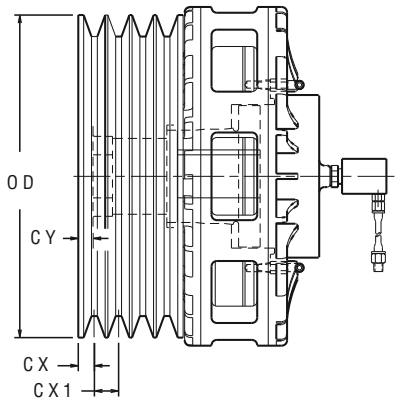




CLUTCH PRODUCT NUMBER	AJ	AK ±.001	BB	BF	CR	CR1	CT	CW	P	HUB LENGTH	SHAFT INSERTION MIN.	SHAFT INSERTION MAX.	U +.002 -.000
963200	9.000	7.998	1.00	.500-13	9.61	13.72	0.38	2.21	18.00	8.13	7.81	9.38	4.000

Sheave Mount; Clutch and Sheave Combined





SHEAVE PRODUCT NUMBER	SHEAVE BELT	SHEAVE GROOVE	OD	CX	CX1	CY
963600	"8V"	4	18.00	0.75	1.13	0.72

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