

## Air-Tube Disc design (Industrial)

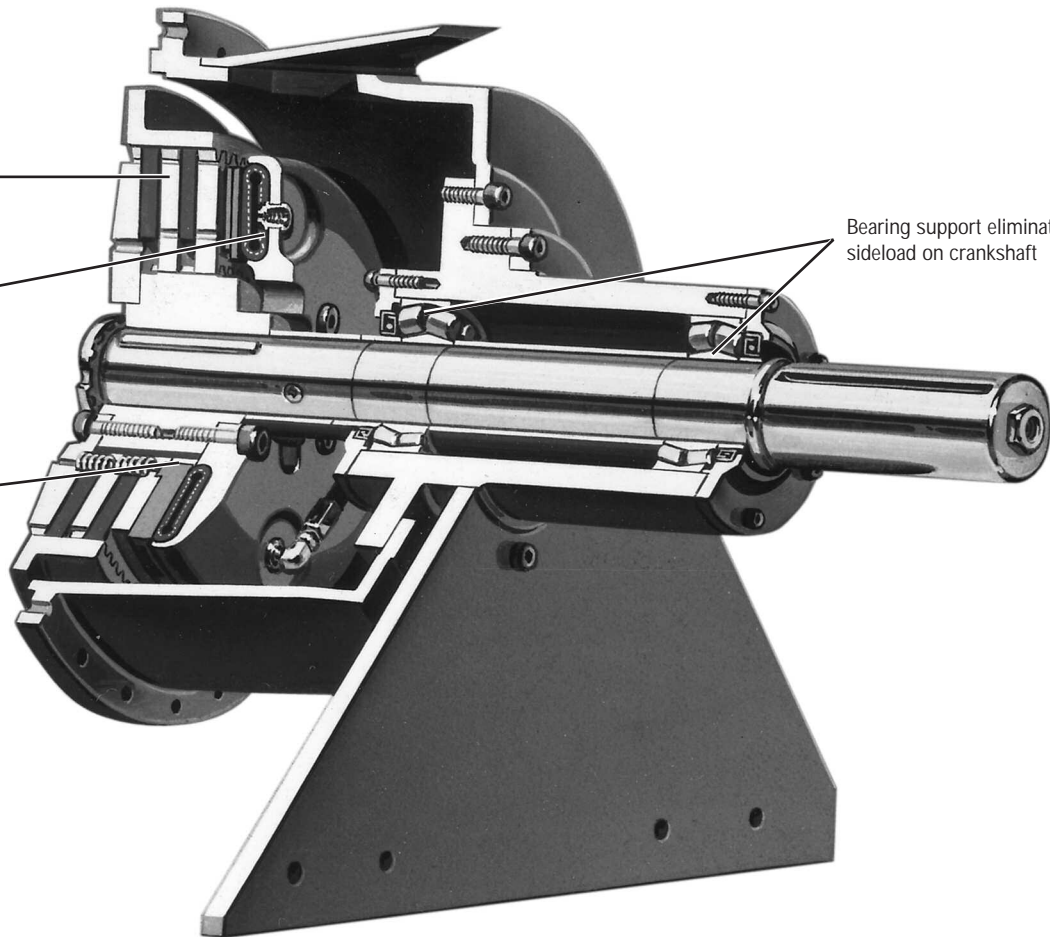
Ideal for automatic controls

Disc design provides smooth shock-free start-ups

High-speed air tube not affected by centrifugal force

No O-rings or diaphragms to wear out

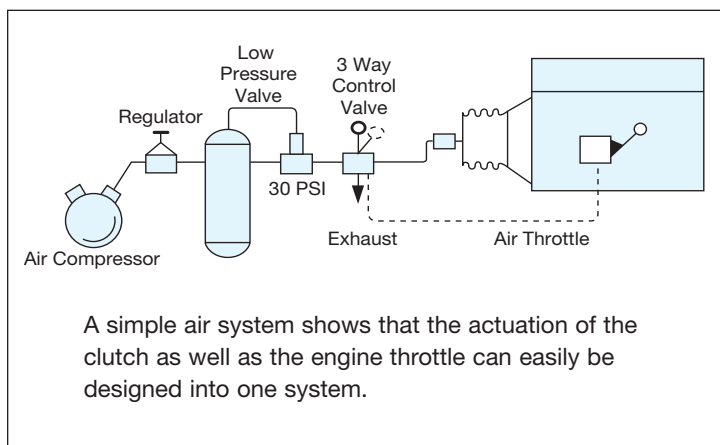
Bearing support eliminates sideload on crankshaft



### Design Features

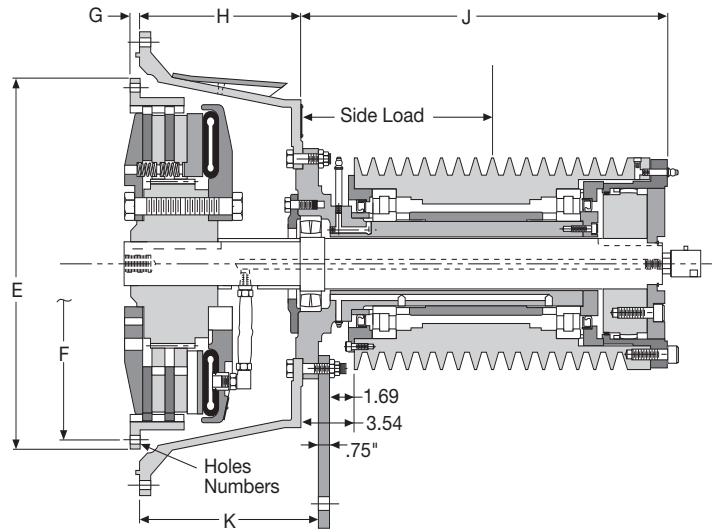
- Disc design provides smooth, shock free start-ups.
- Air activated-ideal for automatic or remote controls.
- Bearing support eliminates sideload on crankshaft.
- High speed air tube not affected by centrifugal force.
- No O-rings or diaphragms to wear out.
- Dynamically balanced for high speed operation.
- Models available for all popular diesel engines. Up to 700 HP capacity.

### Typical air control system

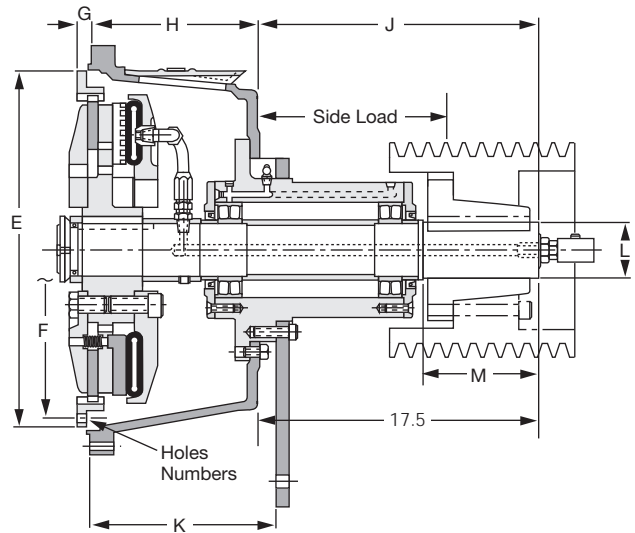


**Air Tube Disc Side Load PTOs**

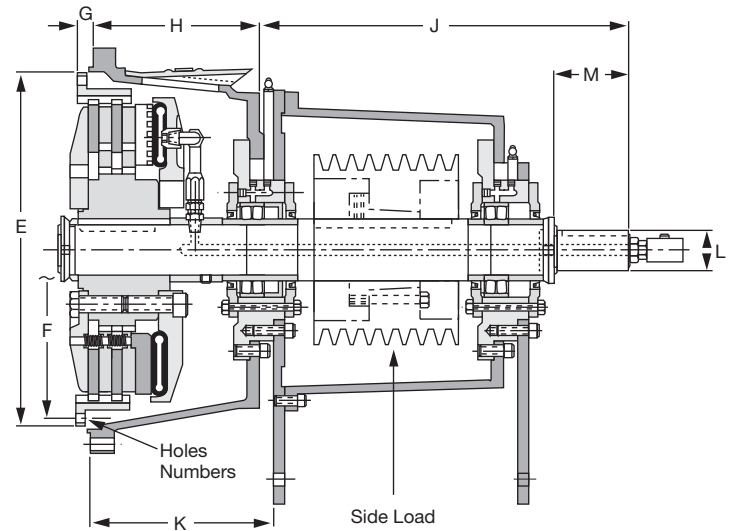
**Type A**



**Type B**



**Type C**



**Dimensions and Specifications:** inches

Parts List No.	Clutch Size	SAE No.	Type	E					L			Holes No.	Keyway	No. & Type of Grooves	P.D. of Sheave	
				+-.000 -.005	F	G	H	J	K	+-.000 -.002	M					
6-715-204-302-0	214H	1	B	18.375	17-1/4	1.000	10-13/16	17-17/32	11-25/32	3.625	7-1/4	17/32	8	7/8 X 7/16	—	—
6-715-204-303-0	214H	1/2	B	18.375	17-1/4	1.750	10-13/16	17-17/32	11-1/32	3.625	7-1/4	21/32	6	7/8 X 7/16	—	—
6-715-204-304-0	214H	0	B	18.375	17-1/4	1.000	10-13/16	17-17/32	11-25/32	3.625	7-1/4	21/32	6	7/8 X 7/16	—	—
6-715-204-306-0	214H	1	C	18.375	17-1/4	1.000	10-13/16	23-15/16	11-13/16	2.500	4-5/8	17/32	8	5/8 X 5/16	8-"8V"	12.3
6-718-104-307-0	118	1/2	B	22.498	21-3/8	1.000	10-5/8	17-17/32	11-25/32	3.625	7-1/4	21/32	6	7/8 X 7/16	—	—
6-718-104-302-0	118	0	B	22.498	21-3/8	.625	10-13/16	17-17/32	11-25/32	3.625	7-1/4	21/32	6	7/8 X 7/16	—	—
6-718-104-306-0	118	0	A	22.498	21-3/8	.625	8-51/64	20-1/2	10-7/64	—	—	21/32	6	—	10-"8V"	15.2
6-718-104-304-0	118	0	A	22.498	21-3/8	.625	8-51/64	20-1/2	10-7/64	—	—	21/32	6	—	10-"D"	15.2
6-718-104-303-0	118	1/2	A	22.498	21-3/8	1.000	10-5/8	23-15/16	11-25/32	—	—	21/32	6	—	16-"8V"	12.5
6-718-104-305-0	118	0	A	22.498	21-3/8	.625	10-13/16	23-15/16	11-25/32	—	—	21/32	6	—	16-"8V"	12.5
6-718-104-301-0	118	1/2	A	22.498	21-3/8	1.000	10-5/8	23-15/16	11-25/32	—	—	21/32	6	—	20-"5V"	12.5
6-718-204-307-0	218	1/2	B	22.498	21-3/8	1.000	10-5/8	17-17/32	11-25/32	3.625	7-1/4	21/32	6	7/8 X 7/16	—	—
6-718-204-308-0	218	0	B	22.498	21-3/8	.625	11-3/16	17-17/32	12-5/32	3.625	7-1/4	21/32	6	7/8 X 7/16	—	—
6-718-204-303-0	218	1/2	A	22.498	21-3/8	1.000	10-5/8	23-15/16	11-25/32	—	—	21/32	6	—	16-"8V"	12.5
6-718-204-304-0	218	1/2	C	22.498	21-3/8	1.000	10-5/8	23-15/16	11-13/16	2.500	4-5/8	21/32	6	5/8 X 5/16	8-"8V"	12.3
6-718-204-301-0	218	0	A	22.498	21-3/8	.625	10-13/16	23-15/16	11-25/32	—	—	21/32	6	—	16-"8V"	12.5
6-718-204-306-0	218	0	C	22.498	21-3/8	.625	10-13/16	23-15/16	11-13/16	2.500	4-5/8	21/32	6	5/8 X 5/16	8-"8V"	12.3
6-718-304-300-0	318	0	B	22.498	21-3/8	.625	12-3/8	17-17/32	13-19/32	3.625	7-1/4	21/32	6	7/8 X 7/16	—	—

Note: For standard SAE engine flywheel dimensions see page 142.

**Allowable Side Load (lbs.) at 1,800 RPM**

Type A	Distance X from base mount-in.	Load lb.	Distance X from base mount-in.	Load lb.
	0	—	14	8,900
	4	5,400	16	7,100
	6	6,300	18	6,000
	8	7,500	20	5,100
	10	9,200	22	4,400
	12	12,000	24	4,300

Note: Derate by 20% for 2,100 RPM.

Type B	Distance X from base mount-in.	side load lb.	Distance X from base mount-in.	Load lb.
	—	—	12	4,400
	4	11,500	13	4,100
	5	9,600	14	3,800
	6	8,200	15	3,600
	7	7,200	16	3,400
	8	6,400	17	3,200
	9	5,800	18	3,000
	10	5,200	19	2,900
	11	4,800	20	2,800

Note: Derate by 20% for 2,100 RPM.

**Type C** 6,500 lb. Max. side load.

Note: Derate by 20% for 2,100 RPM.

**Clutch Specification Table**

Clutch Model	Recommended Maximum PTO HP/100 RPM	Clutch Slip Torque lb.in. at 100 PSI .3 CF.*	Recommended Maximum PTO HP/100 RPM With Heavy Duty Friction Disc
214H	18	71,600	23
118	21	64,500	27
218	42	129,000	54

\* Recommend only 25% of rated torque on PTO's (in.lbs.) - 30% with heavy duty disc.

Note: For mounting, use socket head capscrews conforming to the ASTM-574-97a.

Support plate must be perpendicular to sideload pull.

**Estimated Side Load Calculation**

$$\#1 \quad L = \frac{126,000 \times \text{HP}}{N \times D} \times F \times \text{SF}$$

$$\#2 \quad L = \frac{1,945,000 \times \text{kW}}{N \times D} \times F \times \text{SF}$$

L = Actual Applied Load (lbs. for #1 and Kgs for #2)

N = Shaft Speed (RPM)

D = Pitch Diameter (in. for #1 and mm for #2) of Sheave.

F = Load Factor  
 1.0 for Chain Drive or Gear Drive  
 1.5 for Timing Belts  
 2.5 for All V-belts  
 3.5 for All Flat Belts

SF = Service Factor  
 2.1 for Reciprocating Compressors and other severe shock drives  
 1.8 for Large Inertia Drives such as Crushers, Chippers, and Planers

