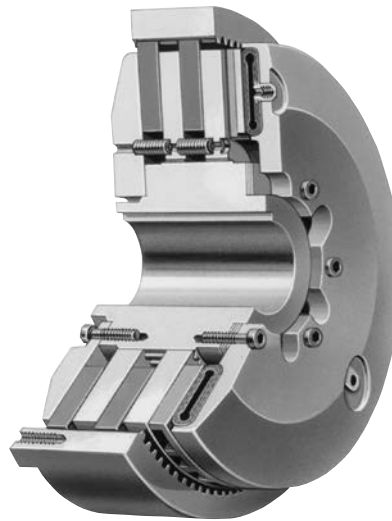


# Standard Vent Clutches

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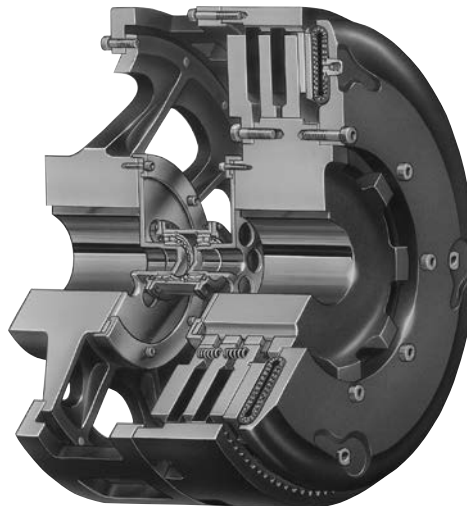
## Coupling Clutches

The Wichita Standard Vent Combination Clutch-Coupling is designed for reliable in-line power transmission. The simple air-tube design, with small air volume, speeds engagement and disengagement. It is unaffected by centrifugal force and has no self-energization like drum clutch designs. Ideally suited for large inertia loads where smooth controlled starts are needed.



## Grinding Mill Clutches

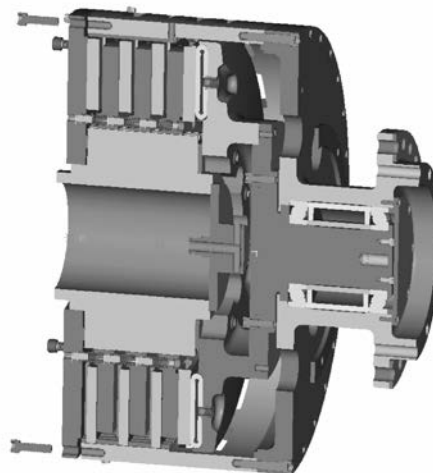
Wichita Grinding Mill Clutches are specially designed to provide quick, smooth starts with limited current surge for heavy duty grinding mills. The clutch is adaptable to remote control allowing centralized operation through simple air or electric circuits.



## Marine Clutches

The Wichita Marine Standard Vent Combination Clutch-Coupling is designed for reliable in-line power transmission. The simple air-tube design, with small air volume, speeds engagement and disengagement.

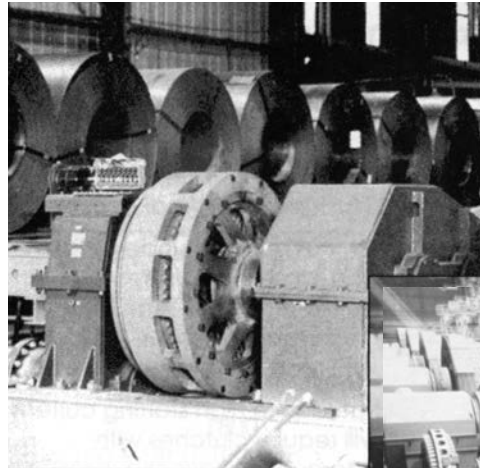
It is unaffected by centrifugal force and has no self-energization like drum clutch designs. Ideally suited for large inertia loads where smooth controlled starts are needed.



## Typical Applications

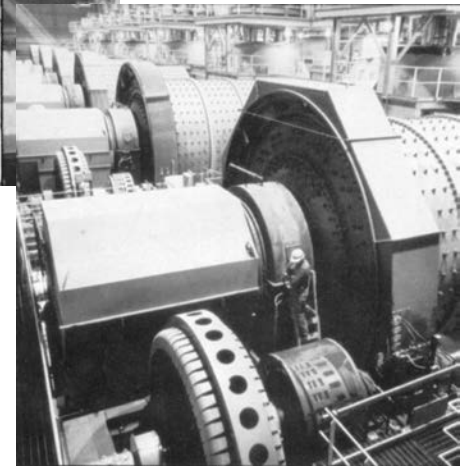


Reliable, trouble-free Wichita Standard Vent Clutches handle maximum loads on drilling rigs.



Wichita Standard Vent Clutches allow smooth acceleration of coil transporter.

Wichita Grinding Mill Clutches provide shock-free start-up of large inertia loads.



## Application Guidelines

Clutch selection is made by knowing the application horsepower/100 RPM, the available air pressure, required torque and the clutch heat horsepower. The Requirements

Table (Chart A) gives application factors ranging from light duty (the A group) to extra heavy duty (the D group).

## Chart A

Field of Application	Group A	Group B	Group C	Group D
Pumps		Centrifugal compressors	Reciprocating compressors over 2 cylinders, centrifugal fans & blowers	Reciprocating compressors one or two cylinders
Agitators	Liquid	Semi-solid	Solids	
Brick manufacturing			Brick press, extruder, pug mill	
Can & bottling machine		Bottle-can feeders, filling, mixers		
Engine driven equipment			Crane, hoist, engine	Crowd
Grinding mills			Ball-rod-sag-pebble	Crushers, shakers
Lumber processing		Yarder	Carriages, conveyers	Chipper, logger
Marine		Propulsion clutch, anchor winch	Shaft brakes, propulsion reversing type	
Bulk material handling	Conveyors evenly loaded, line shaft evenly loaded	Feeders	Elevators	
Metal production & metalforming		Coilers, slitters, press brake, non-g geared press, geared press	Draw bench, rolling mill, shear, back geared press, deep draw press, transfer press, toggle press	Hammer mill, forming press, forging press, header press, knuckle press
Paper industry dryer sections & calenders consult factory			Fourdrinier to 500 FPM, paper mill plane & smoothing press	Fourdrinier to 1800 RPM press selections, calenders & dryers
Petroleum production		Drilling & service rig master clutches, compound clutches, rotary, drum		Mud pumps, PTO clutches
Rubber manufacturing	Transfer machines evenly loaded		Banberry mixer, drum mixer, extruder, calender	Centrifuge



# Standard Vent Clutches

## Coupling and Grinding Mill Clutch Selection

### Specifications

Chart C

Model Size ATD-	Dynamic Slip Torque capacity Nm <sup>(1)</sup> @5.5 bar / @8.5 bar	Maximum speed RPM <sup>(2)</sup> Std performance High performance		Weights and Inertia						Airtube Displacement Volume cm <sup>3</sup> New Worn	
				Total Unit		External Parts		Standard Parts			
				Weight (kg)	Inertia (kg m <sup>2</sup> )	Weight (kg)	Inertia (kg m <sup>2</sup> )	Weight (kg)	Inertia (kg m <sup>2</sup> )		
SV 108	620 - 960	1750	2500	16	0.103	3.6	0.05	8	0.625	55	300
SV 208	1240 - 1920	1750	2500	26	0.155	8	0.074	8	32	55	300
SV 308	-	1750	2500	-	-	-	-	-	-	55	300
SV 111	1400 - 2170	1400	2200	30	0.458	8.6	0.21	19	0.3	90	500
SV 211	2800 - 4340	1400	2200	49	0.715	16	0.43	19	0.3	90	500
SV 311	-	1400	2200	-	-	-	-	-	-	90	500
SV 114H	2435 - 3765	1200	2000	68	1.55	15	0.575	35	0.775	125	700
SV 214H	4870 - 7530	1200	2000	93	1.98	26	0.985	35	0.775	125	700
SV 314H	7305 - 11295	1200	2000	118	-	37	-	35	0.775	125	700
SV 116	3360 - 5190	1200	2000	85	2.53	19	0.945	43	0.863	160	920
SV 216	6720 - 10380	1200	2000	124	3.65	41	1.93	43	0.863	160	920
SV 118	5705 - 8815	1000	1750	125	3.93	21	1.35	72	1.7	250	1400
SV 218	11410 - 17630	1000	1750	176	6.15	42	2.7	72	1.7	250	1400
SV 118H	-	-	-	-	-	-	-	-	-	-	-
SV 218H	-	-	-	-	-	-	-	-	-	-	-
SV 318H	-	-	-	-	-	-	-	-	-	-	-
SV 221	15510 - 23970	900	1400	260	11.2	62	5	100	2.5	300	1600
SV 321	23265 - 35955	900	1400	360	16.3	100	7.43	100	2.5	300	1600
SV 124H	13575 - 20980	700	1100	244	14.6	41	4.15	109	3.08	490	2600
SV 224H	27150 - 41960	700	1100	343	22.4	82	8.2	109	3.08	490	2600
SV 324H	40725 - 62940	700	1100	470	27.9	130	13.3	109	3.08	490	2600
SV 227	30520 - 47170	700	1100	420	29.5	84	10.1	170	10	400	2600
SV 327	45780 - 70755	700	1100	540	39	132	15.8	170	10	400	2600
SV 230H	59260 - 91590	600	1000	624	55.4	130	19.6	250	19.5	960	5100
SV 330H	88890 - 137385	600	1000	860	80	254	38.8	250	19.5	960	5100
SV 336	134760 - 208275	560	800	1281	141	285	41.3	400	50	1800	6800
SV 342	192480 - 297480	460	900	1620	316	487	138	520	112.5	2100	8000
SV 248	237600 - 367200	400	600	2152	495	445	171	900	132.5	3550	13500
SV 348	356400 - 550800	400	600	3500	775	520	420	900	132.5	3550	13500
SV 260	473000 - 731000	340	475	3150	1013	592	325	-	-	8400	29300
SV 360	709000 - 1096000	340	475	4850	1450	570	355	-	-	8400	29300
SV 460	946000 - 1462000	340	475	-	-	-	-	-	-	8400	29300
SV 560	-	340	475	-	-	-	-	-	-	-	-
SV 372	1204500 - 1861500	265	400	-	-	-	-	-	-	-	-

<sup>(1)</sup> Torque Rating - Dynamic torque ratings represent the full clutch capacity. Service conditions vary but as a guide to selection for cycling application use 75% of torque rating. Air Pressure - torque is directly proportional to the air pressure supplied.

<sup>(2)</sup> High Speed - maximum speed ratings may be exceeded in many applications. For advice on speed, service factors etc. consult your Wichita Engineer. Consult factory for drawing before final layout.

Note: Maximum air pressure – 7 BAR



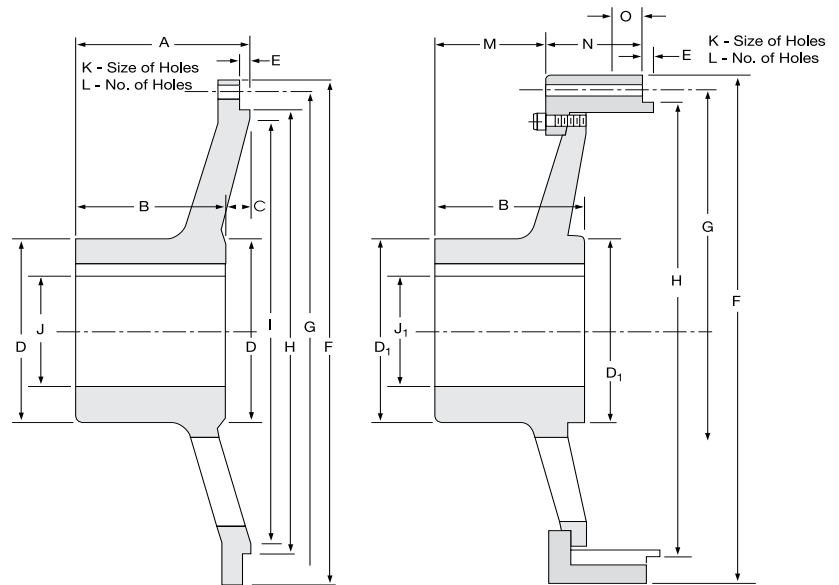
## Standard Vent Clutches - Driving Adapters

### Quick Change Adapters

The quick change feature, using a driving elbow piece between the driving adapter and the clutch driving ring, enables replacement of any wearing clutch part without disturbing either shaft.

### Standard Driving Adapters

The driving adapter is designed to allow the clutch to be used in a shaft-to-shaft or through-shaft coupling arrangement.



Standard Adapter (Standard Gap)

Quick Change Adapter (Access Gap)

Dimensions: mm

Size	A	B	C	D	D <sub>1</sub>	E	F	G	H +.007cm -.000cm
8	79.375	76.2	3.175	95.25	—	3.175	263.525	244.475	225.2726
11	92.075	82.55	9.5	158.75	127	3.175	14.375	365.125	314.2234
14H	136.525	120.65	403	177.8	158.75	6.35	444.5	412.75	384.0734
18	174.625	146.05	28.6	203.2	203.2	9.525	558.8	527.05	495.1984
18H	174.625	146.05	28.6	203.2	203.2	9.525	558.8	527.05	495.1984
21	171.45	152.4	19.05	241.3	228.6	6.35	635	603.25	571.3984
24H	212.725	186	27	254	304.8	6.35	711.2	679.45	647.573
27	222.25	196.85	25.4	279.4	292.1	6.35	787.4	755.65	723.773
30H	234.95	222.25	12.7	355.6	355.6	6.35	863.6	831.85	799.973
36	266.7	254	12.7	381	355.6	6.35	1041.4	1009.65	977.773
42	279.4	254	25.4	381	381	6.35	1250.95	1200.15	1142.873
48	—	346.075	—	—	508	12.7	1422.4	1371.6	1290.32
60	—	412.75	—	609.6	—	9.525	1695.45	1644.65	1593.85

Size	I	Max. Bore Rect. Key J	J <sub>1</sub>	K	L	M	N	O
8	212.725	63.5	—	13.4874	152.4	47.625	—	—
11	298.45	104.902	85.725	16.6624	203.2	50.8	63.5	—
14H	368.3	120.65	104.775	16.6624	152.4	53.975	79.375	—
18	469.9	133.35	133.35	17.4752	152.4	111.125	88.9	—
18H	469.9	133.35	133.35	17.4752	152.4	111.125	88.9	—
21	552.45	158.75	152.4	17.4752	152.4	101.6	158.75	—
24H	622.3	168.402	168.275	17.4752	152.4	131.7752	139.7	—
27	692.15	184.15	193.675	17.4752	304.8	141.3002	117.475	—
30H	774.7	234.95	234.95	17.4752	304.8	165.1	146.05	—
36	952.5	254	234.95	17.4752	406.4	200.025	104.775	—
42	1117.6	254	254	26.1874	304.8	188.9252	144.4752	—
48	—	—	254	26.1874	304.8	257.175	155.575	—
60	—	457.2	—	26.1874	609.6	311.15	292.1	63.5

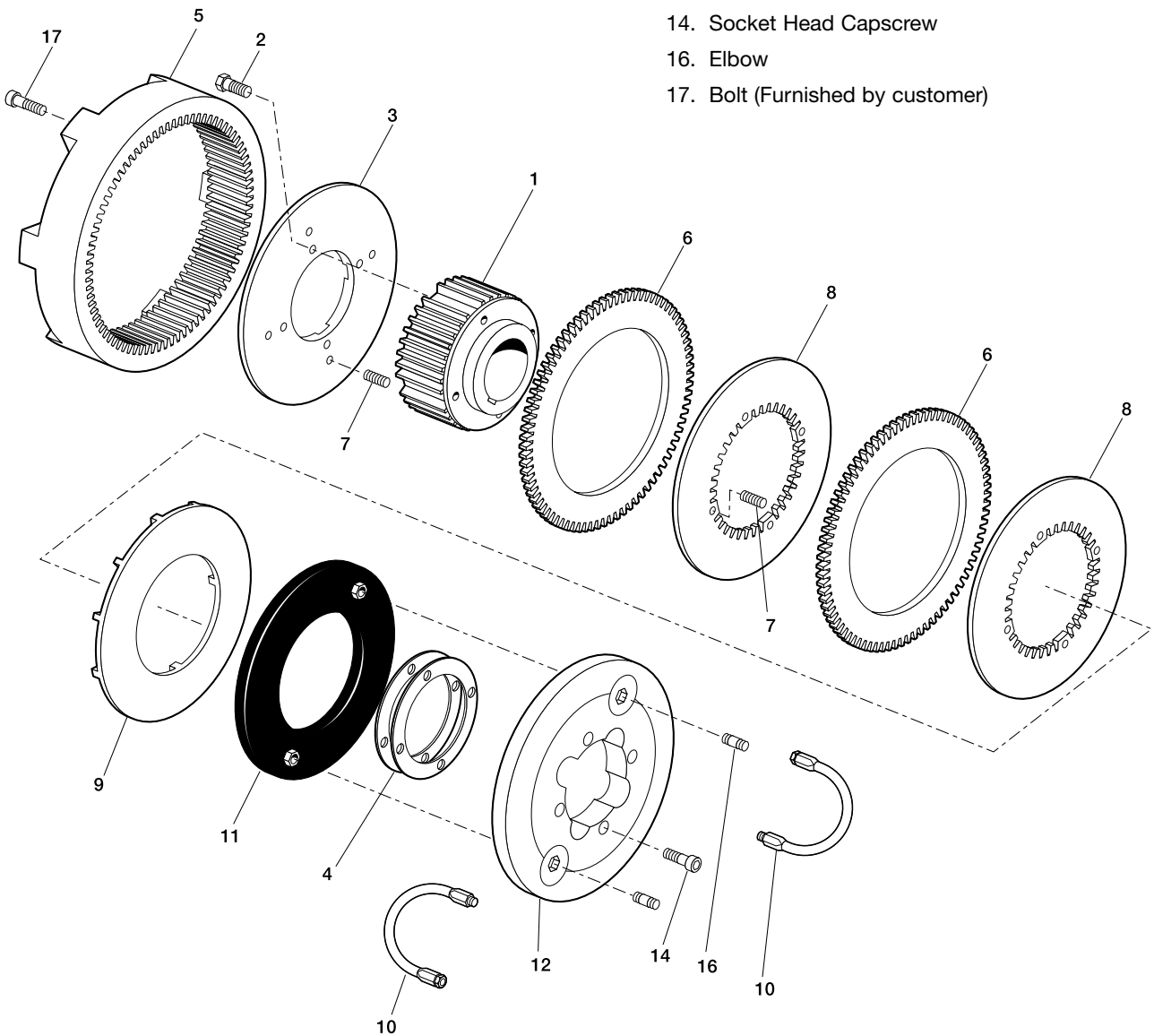
\* Consult Factory

# Standard Vent Clutches

## Coupling and Grinding Mill Clutches

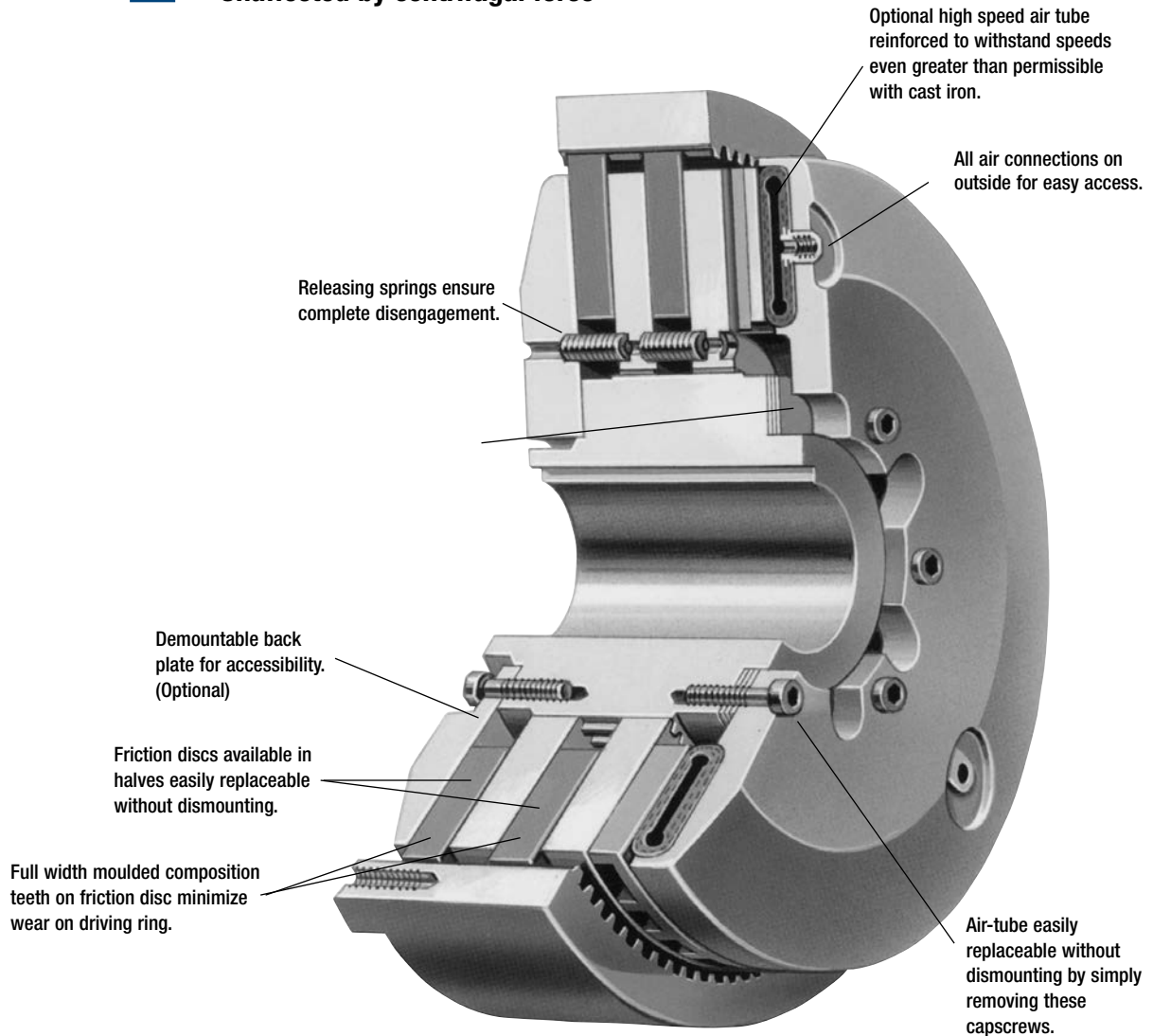
### Component Parts

- |                  |                                  |
|------------------|----------------------------------|
| 1. Hub           | 7. Release Spring                |
| 2. Hex Head Bolt | 8. Center Plate                  |
| 3. Backplate     | 9. Pressure Plate                |
| 4. Shim          | 10. Hose Assembly                |
| 5. Driving Ring  | 11. Air Tube                     |
| 6. Friction Disc | 12. Air Tube Holding Plate       |
|                  | 14. Socket Head Capscrew         |
|                  | 16. Elbow                        |
|                  | 17. Bolt (Furnished by customer) |



## Coupling Clutches

- In-line power applications
- Smooth, controlled acceleration
- Unaffected by centrifugal force



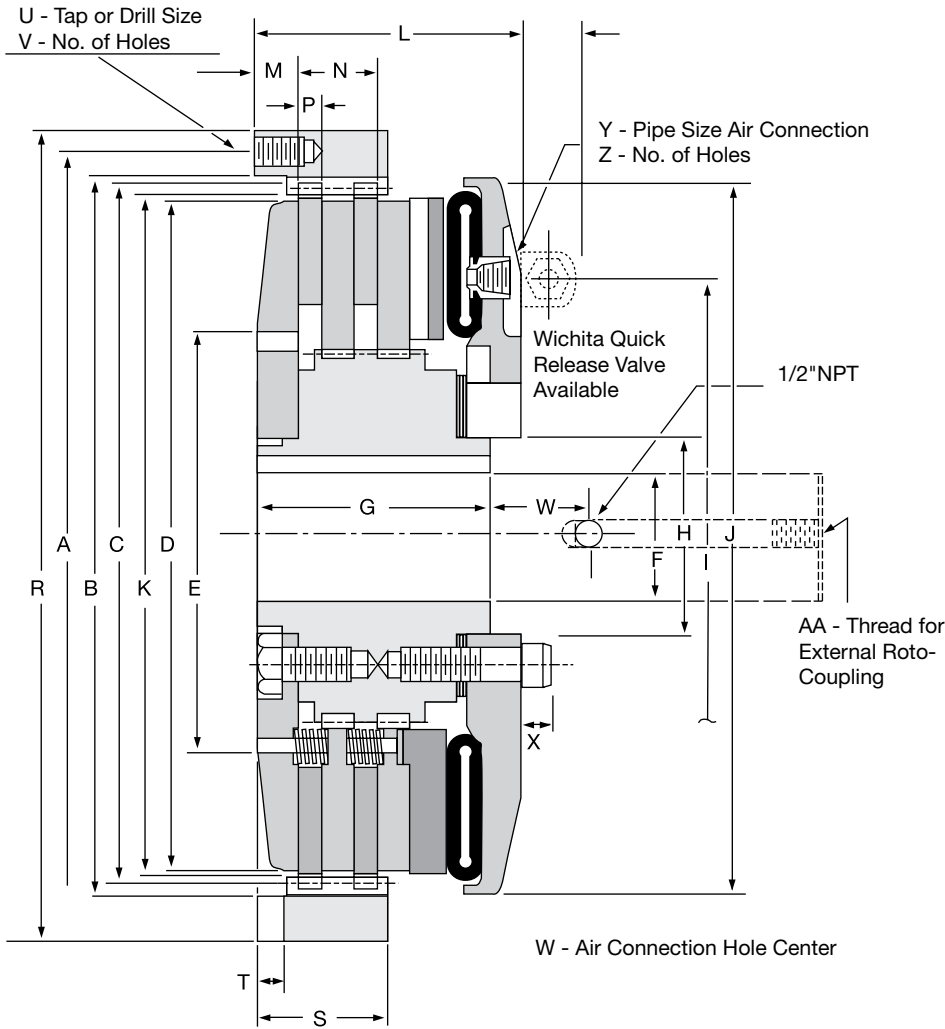
The Wichita Standard Vent Combination Clutch-Coupling is designed for reliable in-line power transmission. The simple air-tube design, with small air volume, speeds engagement and disengagement. It is unaffected by centrifugal force and has no-self-energization like drum clutch designs. Ideally suited for large inertia loads where smooth controlled starts are needed.

The Wichita air-tube disc design combines all the best features of a disc type clutch with all the advantages of direct air engagement.

The compact design, capable of smoothly engaging and disengaging, employs the simplest and most trouble-free method of applying air pressure yet designed.

# Standard Vent Clutches

## Coupling Clutches



# Standard Vent Clutches

Dimensions: mm

Model Size ATD-	Max Bore Rect. Key									
	A	B	C	D	E	F	G	H	I	J
108 SV	244	225.5	215.9	203.2	203.2	49	69.85	49	168.27	244
208 SV	244	225.5	215.9	203.2	203.2	49	104.77	49	168.27	244
308 SV	244	225.5	215.9	203.2	203.2	49	139.7	49	168.27	244
111 SV	340	314.4	304.8	279.4	279.4	75	76.2	76	215.9	303
211 SV	340	314.4	304.8	279.4	279.4	75	107.95	76	215.9	303
311 SV	340	314.4	304.8	279.4	279.4	75	141.3	76	215.9	303
114H SV	413	384.25	372.6	355.6	238.12	83	109.5	115	317.5	413
214H SV	413	384.25	372.6	355.6	238.12	83	146.05	115	317.5	413
314H SV	413	384.25	372.6	355.6	238.12	83	182.57	115	317.5	413
118 SV	527	495.4	476.25	457.2	292.1	90	120.65	133	355.6	492
218 SV	527	495.4	476.25	457.2	292.1	90	158.75	133	355.6	492
118H SV	527	495.4	476.25	457.2	292.1	90	120.65	133	406.4	549
218H SV	527	495.4	476.25	457.2	292.1	90	158.75	133	406.4	549
318H SV	527	495.4	476.25	457.2	292.1	90	196.85	133	406.4	549
321 SV	527	571.5	552.45	533.4	355.6	115	231.77	178	406.4	549
124H SV	679	571.5	628.65	533.4	406.4	115	149.22	178	533.4	686
224H SV	679	571.5	628.65	533.4	406.4	115	184.15	178	533.4	686
324H SV	679	571.5	628.65	533.4	406.4	115	238.12	178	533.4	686
327 SV	679	724	704.85	685.8	495.3	190	247.65	229	533.4	686
230H SV	832	800.1	781.05	762	571.5	152	215.9	229	628.65	822
330H SV	832	800.1	781.05	762	571.5	152	292.1	229	628.65	822
336H SV	1010	978	952.5	914.4	711.2	229	320.67	343	774.7	972
342 SV	1200	1143	1117.6	1066.8	1066.8	254	301.62	533	889	1121
248 SV	1372	1320.8	1295.4	1219.2	889	305	276.22	533	1016	1305
348 SV	1372	1320.8	1295.4	1219.2	889	305	346	533	1016	1330
260 SV	1645	1594	1574.8	1524	917.6	-	412.75	575	1181.1	1562
360 SV	1645	1594	1574.8	1524	917.6	-	508	575	1181.1	1562
460 SV	1645	1594	1574.8	1524	917.6	-	596.9	575	1181.1	1562

<sup>(1)</sup> Dimension "C" is given as a nominal figure. The applicable tolerance is ISO H7. (Consult factory for drawing before final layout.)

Model Size ATD-	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z
108 SV	210	102	19.05	—	11.12	264	35	12.7	6xM12	6	57.1	12.7	1/2	50.8
208 SV	210	137	19.05	44.4	11.12	264	70	12.7	6xM12	6	57.1	12.7	1/2	50.8
308 SV	210	168	19.05	77.8	11.12	264	38	12.7	6xM12	6	57.1	12.7	1/2	50.8
111 SV	299	102	22.225	—	12.7	365	38	12.7	8xM16	8	63.5	11.12	1/2	50.8
211 SV	299	138	22.225	44.4	12.7	365	73	12.7	8xM16	8	63.5	11.12	1/2	50.8
311 SV	299	171	22.225	76.2	12.7	365	107	12.7	8xM16	8	63.5	11.12	1/2	50.8
114H SV	367	129	28.575	—	15.87	445	48	15.8	6xM16	6	57.1	19.05	1/2	50.8
214H SV	367	165	28.575	50.8	15.87	445	83	19	6xM16	6	57.1	19.05	1/2	50.8
314H SV	367	203	28.575	85.7	15.87	445	120	19	6xM16	6	57.1	19.05	1/2	50.8
118 SV	477	143	33.3502	—	15.87	559	49	19	6xM16	6	62	25.4	1/2	76.2
218 SV	477	181	33.3502	53.9	15.87	559	89	19	6xM16	6	62	25.4	1/2	76.2
118H SV	477	143	33.3502	—	15.87	559	49	19	6xM16	6	62	25.4	1/2	76.2
218H SV	477	185	33.3502	53.9	15.87	559	89	19	6xM16	6	62	25.4	1/2	76.2
318H SV	477	221	33.3502	95.2	15.87	559	130	19	6xM16	6	62	25.4	1/2	76.2
321 SV	543	257	41.275	107.9	19.05	635	159	25	6xM16	6	60.3	25.4	1/2	76.2
124H SV	618	167	41.275	—	22.22	711	72	19	6xM16	6	69.8	25.4	1/2	76.2
224H SV	618	221	41.275	69.8	22.22	711	114	19	6xM16	6	69.8	25.4	1/2	76.2
324H SV	618	264	41.275	117.5	22.22	711	159	19	6xM16	6	69.8	25.4	1/2	76.2
327 SV	696	265	41.275	117.5	22.22	787	165	35	12xM16	12	60.3	25.4	1/2	76.2
230H SV	771	257	41.275	95.2	31.75	864	143	35	12xM16	12	73	25.4	1/2	101.6
330H SV	771	327	41.275	158.7	31.75	864	206	35	12xM16	12	73	25.4	1/2	101.6
336H SV	944	365	49.2252	180.9	34.92	1041	232	38.1	12xM16	16	73	25.4	1/2	101.6
342 SV	1108	365	50.8	187.32	34.92	1251	244	38.1	12xM24	12	88.9	31.75	1/2	101.6
248 SV	1290	378	66.675	104.77	34.92	1441	219	50.8	12xM24	12	88.9	31.75	1/2	101.6
348 SV	1290	403	66.675	174.62	34.92	1422	251	50.8	12xM24	12	88.9	31.75	1/2	101.6
260 SV	1567	413	76.2	139.7	76.2	1695	229	63.5	12xM30	24	50.8	50.8	1/2	152.4
360 SV	1567	508	76.2	228.6	76.2	1695	330	63.5	12xM30	24	50.8	50.8	1/2	152.4
460 SV	1567	594	76.2	317.5	76.2	1695	419	63.5	12xM30	24	50.8	50.8	1/2	152.4

(Consult factory for drawing before final layout.)