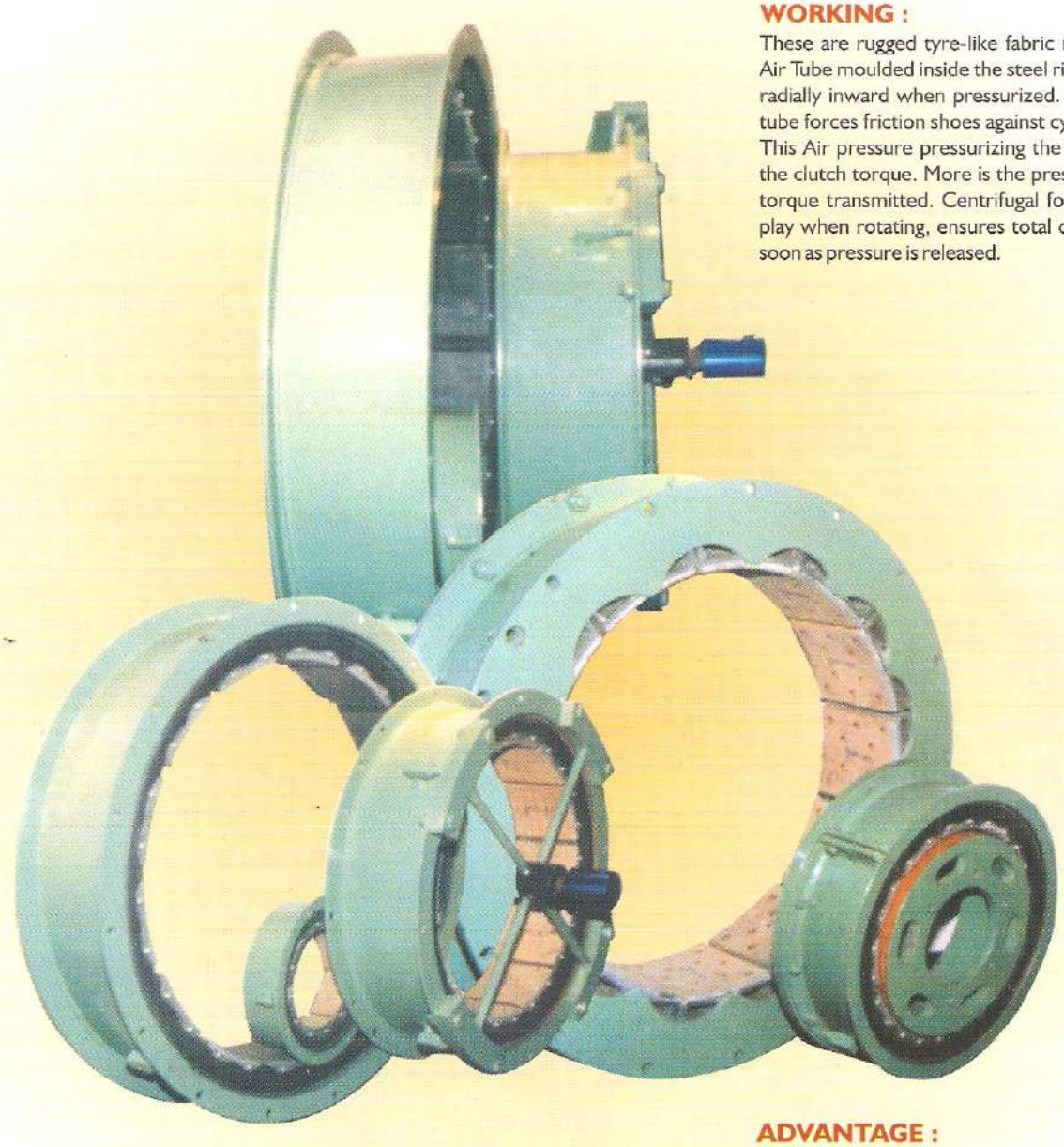
AIRTORQ

PNEUMATIC INDUSTRIAL CLUTCHES AND BRAKES



WORKING :

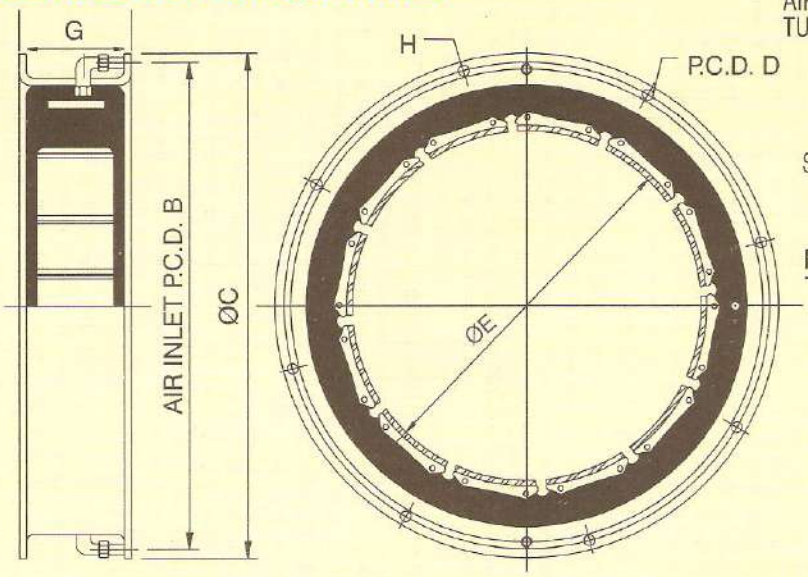
These are rugged tyre-like fabric reinfaced Rubber Air Tube moulded inside the steel rim. These expand radially inward when pressurized. This constricting tube forces friction shoes against cylinderical drums. This Air pressure pressurizing the tube determines the clutch torque. More is the pressure more is the torque transmitted. Centrifugal forces coming into play when rotating, ensures total disengagement as soon as pressure is released.

ADVANTAGE :

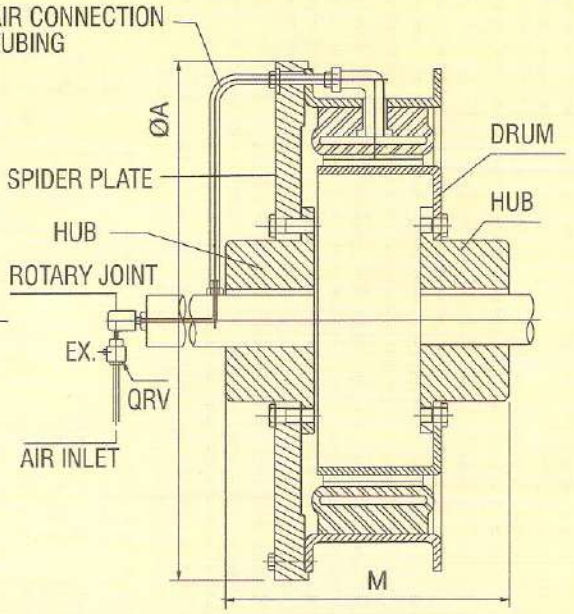
- Airtube applies force at the maximum radius from axis.
- Uniform contact velocity at drum-shoe interface.
- Self adjusting, no adjusting for wear.
- It requires no lubrication.
- Centrifugal forces assist clutch disengagements.
- It operates in any plane.
- Highly efficient, rugged & reliable.
- Flexible rubber reinforced air tube dampen the shocks & compensate for slight misalignment.
- Full 360 friction surface.

AIRTORQ

FLEXIBLE CLUTCHES/BRAKES



ELEMENT ASSEMBLY



COMPLETE CLUTCH UNIT

They are designed to be used both as clutches & brakes in power transmission equipments. They transmit torque through the side walls of the flexible air tube, using torsional resiliency principle. This flexibility also permits minor shaft misalignment.

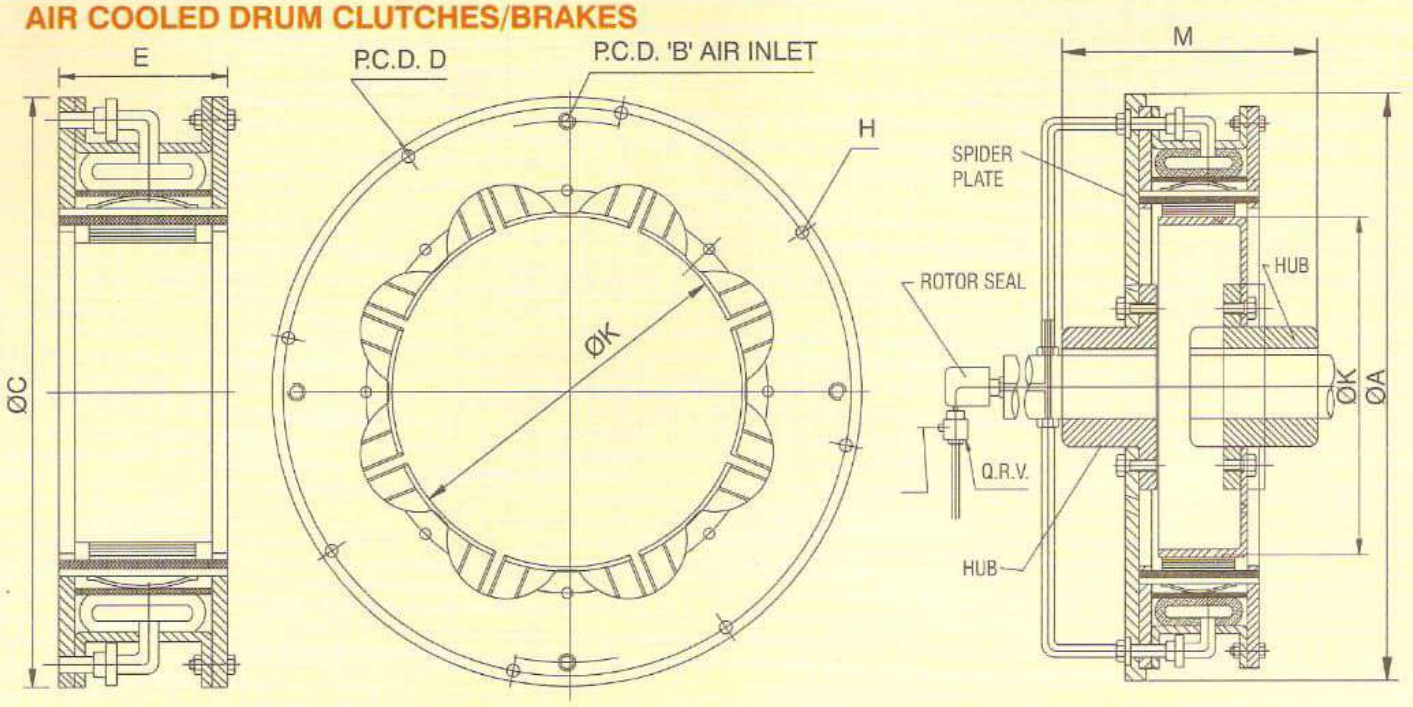
These clutches/Brakes elements are also available in split design in two halves, to cut maintenance time.

CAPACITIES AND DIMENSIONS

MODEL	TORQUE		Max. RPMs.	Max. Bore Dia	ØA	M	P.C.D. B	ØC	P.C.D. D	ØE	G	H	
	N.M. (at 5.2 bar)	lb-in (at 75 psi)					1,2,4					Nos.	Dia.
AD 100x50	113	1000	2000	50	154	205	170	184.1	170.0	105	67	8	10
AD 150x50	231	2040	1800	65	283	213	254	273.1	254.0	156	75	8	10
AD 200x65	485	4290	1800	75	337	238	308	327.0	308.0	207	87	8	10
AD 250x75	921	8150	1800	100	400	274	371	390.5	371.5	257	98	12	10
AD 250x85	1040	9205	1800	100	400	284	371	390.5	371.5	257	108	12	10
AD 300x85	1500	13300	1800	100	458	310	429	447.7	428.6	308	115	14	10
AD 300x100	1862	16475	1800	100	458	458	429	447.7	428.6	308	120	14	10
AD 350x100	2230	19700	1800	100	509	509	479	498.5	479.4	359	133	16	10
AD 400x125	3980	35200	1550	110	610	610	565	597.0	571.5	411	168	8	13
AD 450x125	4970	44000	1400	125	660	660	619	647.7	619.0	462	168	12	13
AD 500x125	6060	53600	1300	130	715	715	670	698.5	670.0	513	168	12	13
AD 550x125	7040	62300	1250	145	762	762	721	749.3	720.5	564	168	12	13
AD 610x125	8580	75000	1200	145	815	815	772	800.0	771.5	614	168	16	13
AD 715x135	12000	106000	1000	145	930	930	876	914.5	882.7	716	176	16	16

- Recommended air pressure is 5-7kg/cm^2, lower pressure may result in excessive slip, thus damaging the clutch permanently, max. allowable air pressure is 110 psi (7.6 bar).
- Dynamic torque shown, static torque approximately 25% higher.
- Max. RPMS, depend upon operating conditions & varies for each applications. Consult factory for application exceeding these speeds.

AIR COOLED DRUM CLUTCHES/BRAKES



ELEMENT ASSEMBLY **COMPLETE CLUTCH UNIT**

This type is generally used in clutch & Brake application where large inertia loads are involved resulting in loss of torque & operating life. In this torque is transmitted by steel torque bars rather than the side walls of activating air tube. In this friction shoes & side plates have large air passages which allows air to flow through the clutch. This type of clutch can take substantial amount of slip.

These clutches/Brakes elements are also available in split design in two halves, to cut maintenance time.

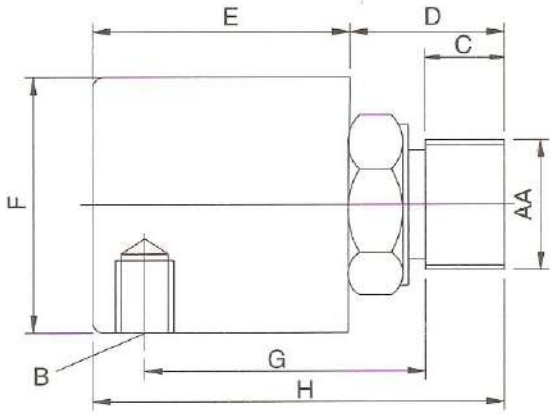
CAPACITIES AND DIMENSIONS

MODEL	TORQUE		Max. RPMs.	Max. Bore Dia	ØA	M	P.C.D. B	ØC	ØE	ØK	P.C.D. D	H	
	N.M. (at 5.2 bar)	lb-in (at 75 PSI)										Nos.	Dia.
EAC 250x100	1564	13850	1800	100	440	346	400.0	432	124	254	400.0	12	13.0
EAC 295x125	3050	27000	1800	105	510	408	479.4	498	156	292	479.4	16	10.0
EAC 350x125	4430	39200	1500	127	610	460	565.0	597	156	355	571.5	8	13.0
EAC 350x255	9610	85000	1500	127	610	620	565.0	597	294	355	571.5	8	13.0
EAC 400x155	7350	65000	1400	127	660	490	619.0	648	187	406	619.0	12	13.0
EAC 500x155	10500	93000	1200	140	780	522	721.0	750	187	508	721.0	12	13.0
EAC 610x165	15300	135000	1050	152	895	548	826.0	864	195	610	832.0	16	16.0
EAC 715x165	20600	182000	1000	243	995	624	927.0	965	195	711	933.5	16	16.0
EAC 810x255	46900	415000	1050	230	1130	773	1070.0	1114	295	813	1083.0	24	16.0
EAC 965x300	76800	680000	740	235	1270	867	1219.0	1254	349	965	1216.0	20	19.5
EAC 1070x300	92500	819000	670	254	1378	918	1327.0	1362	349	1067	1324.0	24	19.5

- Recommended air pressure is 5-8kg/cm^2, lower pressure may result in excessive slip, max. allowable air pressure is 125 psi (8.6 bar).
- Dynamic torque shown, static torque approximately 25% higher.
- Max. RPMS, depend upon operating conditions & varies for each applications Consult factory for applications exceeding these speeds.

AIR ROTARY JOINTS

MODEL	AA	B	C	D	E	F	G	H	Max. R.P.M.
RJ-05	5/16 18 NF or 3/8 BSP	¼ NPT	15	30	57	43	58	86	3500
RJ-04	½" BSP	3/8 BSP	15	28	64	48	60	90	3500
RJ-08	1"-14 NF	½" NPT	19	32	81	63	76	113	3500
RJ-012	1½"-12 NF	1" NPT	29	49	124	83	87	173	2500
RJ-016	2" NPT	2" NPT	38	76	180	118	180	255	1000
RJ-020	2½" NPT	2½" NPT	48	83	238	180	197	320	800



It is device to connect, or couple a non-rotating air, gas or fluid line to a rotary shaft. External threads on the seal shaft and standard pipe threads on the inlet end make installation job easy.
Max. air pressure allowed - 10 kg./cm²

CLUTCH SELECTION PROCEDURE

$$T = \frac{H.P. \times 63.000}{R.P.M.}$$

$$Td = T \times S.F.$$

H.P. = Horse Power of Drive Section
R.P.M. = Clutch Shaft Operating R.P.M.
T = Torque (lb-in)
Td = Design Torque (lb-in)
S.F. = Service Factor

Select the suitable model against the required Torque Td.

OTHER PRODUCTS

- **Pneumatic Water/Air Cooled Tensioning Brakes**
- **Pneumatic Disc Brakes**
- **Pneumatic Clutch/Brake Combinations**
- **Pneumatic Disc Clutches**

RECOMMENDED SERVICE FACTORS

PAPER M/C CLUTCH APPLICATION	SERVICE FACTOR
Couch with Plain Brgs.	5.0
Couch with Anti Friction Brgs.	3.75
Suc. Press with Plain Brgs.	5.0
Suc. Press with Anti Friction Brgs.	3.75
Plain Press with Plain Brgs.	3.75
Plain Press with Anti Friction Brgs.	2.5
Smoothing Press with Plain Brgs.	3.75
Smoothing Press with Anti Friction Brgs.	2.5
Breaker Press with Plain Brgs.	3.75
Breaker Press with Anti Friction Brgs.	2.5
Size Press with Plain Brgs.	3.75
Size Press with Anti Friction Brgs.	2.5
Dryers with Anti Friction Brgs. & Helper Drive	7.5
Dryers with Anti Friction Brgs. & without Helper Drive	8.0
Yankee Dryer	5.0
Calender with Plain Brgs.	10.0
Calender with Anti Friction Brgs.	7.5
Reeler	2.5

OIL & WATER WELL DRILLING EQP.	SERVICE FACTOR
Engine 6 cyl.	5.5
Engine 6 cyl.	4.0
Engine 10 cyl. or more	3.0
Slush Pump	1.8
Compound	1.5
Transmission	1.5
Rotary	1.5
Master	1.25
Cat Head	1.8
Power take off	2.0
Engine	1.8
Hoist	1.5
Sand Propulsion	2.0
Speed Dum	2.0
Marine Propulsion	.....
Propeller Brake	.....
Trawling Winch	2.0
Auxiliary Engine	1.8

Manufactured & Marketed By :

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