

Large Air Clutches

LARGE AIR CLUTCHES

MODEL PO-SIZES 14,18, 24, 30, 36, AND 42 INCHES

- Available in 1, 2 or 3 plate construction
- Unique release spring design
- Integral Quick-Release Valve
- Positive Release and positioning of pressure and center plates
- Four oversize release springs, well-removed from heat zone, assure quick, positive release
- Narrower width allows more compact installation
- Heavy, rugged teeth for longer wear life
- Large diaphragm area provides up to 35 percent higher torque capacity
- Trouble-free diaphragm eliminates release drag; field-proven for long life
- Large passages, with cored back plate, assure adequate air-cooling to all parts



CAPACITY DATA

Clutch Model	Application Duty Classification				Maximum Slip Torque @130 PSI Nm (lb-ft)	Maximum Safe Operating Speed		Air Volume to Engage (fully worn cubic inches)
	Class I Work Torque Nm (lb-ft)	Maximum rating - kW (hp)				Solid Plates	Split Plates	
		Class II	Class III	Class IV				
P0-114	3813 (2812)	140 (188)	93 (125)	70 (94)	5084 (3750)	2400	1950	34
P0-214	7626 (5625)	280 (376)	187 (251)	140 (188)	10,169 (7500)	2500	1950	66
P0-314	11,439 (8437)	421 (564)	280 (376)	210 (282)	15,253 (11,250)	2500	1920	71
P0-118	7575 (5587)	232 (311)	154 (207)	116 (156)	10,101 (7450)	1800	1550	56
P0-218	15,151 (11,175)	464 (622)	309 (415)	232 (311)	20,202 (14,900)	1950	1550	105
P0-318	22,726 (16,762)	696 (933)	464 (622)	348 (467)	30,303 (22,350)	2050	1550	157
P0-124	17,592 (12,975)	412 (553)	274 (368)	206 (276)	23,456 (17,300)	1400	1150	115
P0-224	35,183 (25,950)	825 (1106)	550 (737)	412 (553)	46,911 (34,600)	1450	1000	220
P0-324	52,775 (38,925)	1237 (1659)	825 (1106)	618 (829)	70,367 (51,900)	1450	975	331
P0-230	66,096 (48,750)	1289 (1728)	859 (1152)	644 (864)	88,128 (65,000)	1100	925	335
P0-330	99,144 (73,125)	1933 (2592)	1289 (1728)	966 (1296)	132,192 (97,500)	1100	925	510
P0-236	113,075 (83,400)	1855 (2488)	1237 (1659)	928 (1244)	15,185 (111,200)	825	600	510
P0-336	169,613 (125,100)	2783 (3732)	1855 (2488)	1391 (1866)	226,150 (166,800)	1100*	850*	760
P0-324	280,654 (207,000)	3788 (5080)	2526 (3387)	1894 (2540)	374,206 (276,000)	1100*	850*	1580

*Steel driving ring.

For best clutch performance when used as:
Master or Operating Clutch - limit use to 75% of maximum input torque and derate for apply pressures less than 130 psi.

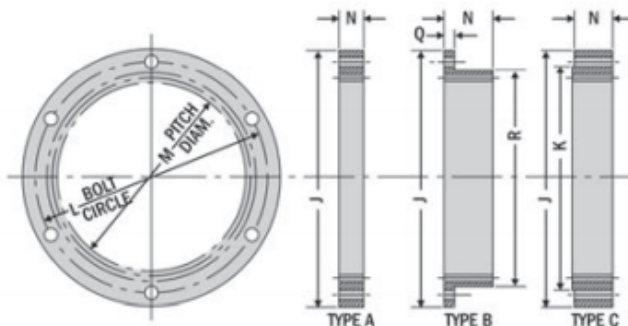
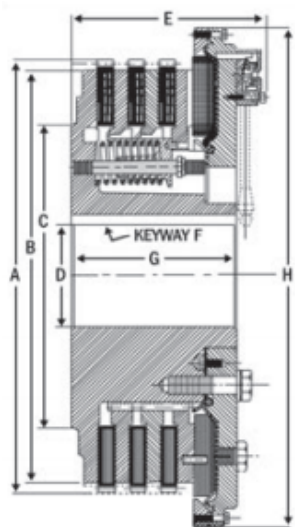
Class I = Disconnect, Class II = Light Duty, Class III = Normal Duty, Class IV = Heavy Duty

Maximum Speeds - The maximum speeds listed in this bulletin are safe permissible speeds possible with cast iron driving rings. The driving ring is normally the most critical member because it has the largest diameter. It should be remembered that the maximum speed listed is usually set considerably above the desired operating speed in the average installation.

DIMENSIONAL DATA

Model	Weight kg (lbs)	A	B	C	D (max.)	E	F	G	H
P0-114	66 (145)	15.15	14.00	10.00	$\frac{3.500}{3.499}$	5.87	.88 x .44	66 (145)	18.50
P0-214	84 (185)					7.25		84 (185)	
P0-314	100 (200)					8.62		100 (200)	
P0-118	118 (260)	19.15	18.00	9.38	$\frac{4.500}{4.499}$	6.28	1 x .50	118 (260)	22.50
P0-218	159 (350)					7.90		159 (350)	
P0-318	191 (420)					9.53		191 (420)	
P0-124	259 (570)	25.15	24.00	17.75	$\frac{6.000}{5.998}$	7.41	1.25 x .63	259 (570)	28.88
P0-224	299 (660)					9.11		299 (660)	
P0-324	399 (880)					10.86		399 (880)	
P0-230	508 (1120)	31.15	30.00	20.75	$\frac{7.000}{6.997}$	9.78	1.50 x .75	508 (1120)	34.50
P0-330	590 (1300)					11.68		590 (1300)	
P0-236	839 (1850)	37.15	36.00	23.75	$\frac{7.750}{7.747}$	11.05*	2 x 1	839 (1850)	40.00
P0-336	1089 (2400)					13.55		1089 (2400)	
P0-324	1760 (3880)	43.15	42.00	34.00	$\frac{10.000}{9.997}$	16.30*	2 x 1	1760 (3880)	46.75

* Maximum width: PO-236 - 11.08; PO-336 - 13.58;
PO-342 - 16.46



CLUTCH DRIVING RINGS

Model	Type Ring	J + .000 - .005	K	L	M	N	Q	R	Holes No. Size	Teeth 20° P.A.
P0-114	B	18.38	-	17.25	14.75	1.13	.50	16.00	8 - 53	59 - .80P.
P0-214						2.38				
P0-314						4.00				
P0-118	A	22.50	-	21.38	18.75	1.13	-	-	6 - .78	75 - .80P.
P0-218	B					3.06	.63	20.00		
P0-318	B					4.25	.63	20.13		
P0-124	A	28.88	-	27.25	24.75	1.50	-	-	12 - .78	99 - .80P.
P0-224	B					3.50	.75	25.88		
P0-324	B					5.50	.75	25.88		
P0-230	C	34.75	32.00	33.00	30.75	4.50	4.38	-	12 - .78	123 - .80P.
P0-330						7.00	6.88	-		
P0-236	C	40.00	37.50	38.50	36.75	4.75	4.63	-	12 - .78	147 - .80P.
P0-336						7.50	7.38	-	24 - .78	
P0-324	C	46.75	46.00	45.00	42.75	7.50	7.38	-	24 - .78	171 - .80

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Medium Air Clutches

MEDIUM AIR CLUTCHES

MODEL PO-SIZES 8, 10 AND 11.38 INCHES

- Available in 1, 2 or 3 plate construction
- Molded non-asbestos gear-tooth driving plates furnished as standard
- Ample diaphragm travel eliminates need for wear adjustment
- Cartridge-type diaphragm assembly eliminates leakage problems
- Insulator plate shields diaphragm from source of heat
- Diaphragm formed from neoprene reinforced with nylon
- Threaded nut provides quick disassembly
- Generous release springs provide fast, positive release



CAPACITY DATA

Clutch Model	Application Duty Classification				Maximum Slip Torque @130 PSI Nm (lb-ft)	Maximum Safe Operating Speed		Air Volume to Engage (fully worn cubic inches)
	Class I Work Torque Nm (lb-ft)	Maximum rating - kW (hp)				Solid Plates	Split Plates	
		Class II	Class III	Class IV				
P0-108	526 (388)	45 (61)	31 (41)	23 (31)	702 (518)	3600	3050	6
P0-208	1068 (788)	92 (123)	61 (82)	45 (61)	1406 (1037)	4200	3650	11
P0-308	1581 (1166)	137 (184)	92 (123)	69 (92)	2108 (1555)	4250	3650	13
P0-110	892 (658)	72 (96)	48 (64)	36 (48)	1189 (877)	3100	2650	9
P0-210	1786 (1317)	143 (192)	95 (128)	72 (96)	2381 (1756)	3600	2900	16
P0-310	2678 (1975)	215 (288)	143 (192)	107(144)	3570 (2633)	3650	2950	19
P0-111	1569 (1157)	92 (124)	61 (82)	206 (62)	2092 (1543)	2850	2200	14
P0-211	3137 (2314)	184 (247)	123 (165)	92 (124)	4183 (3085)	2850	2200	25
P0-311	4706 (3471)	277 (371)	184 (247)	139 (186)	6275 (4628)	3250	2720	31

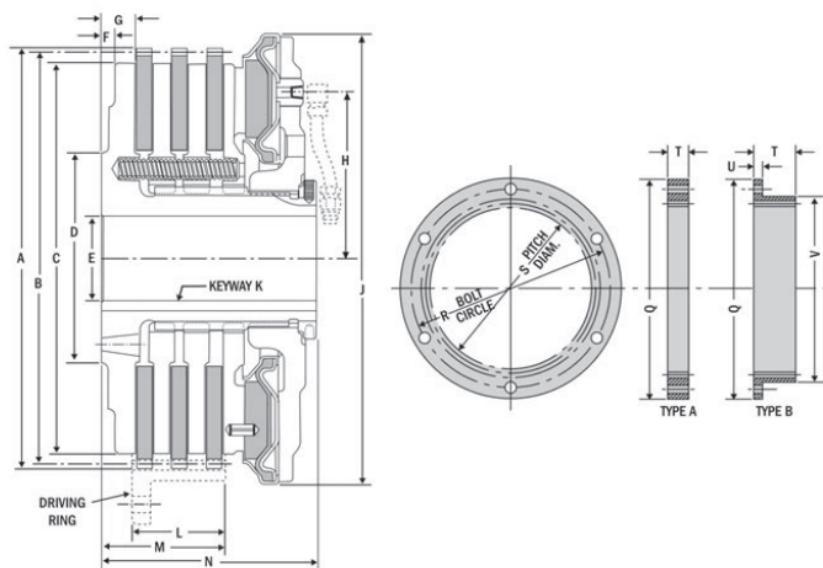
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Maximum Speeds - The maximum speeds listed in this bulletin are safe permissible speeds possible with cast iron driving rings. The driving ring is normally the most critical member because it has the largest diameter. It should be remembered that the maximum speed listed is usually set considerably above the desired operating speed in the average in installation.

DIMENSIONAL DATA

Model	Weight kg (lbs)	A	B	C	D	E (max.)	F	G	H	J	K	L	M	N
P0-108	15 (32)	8.75	8.50	8.00	6.00	$\frac{2.4375}{2.4365}$	.06	.50	3.66	10.06	.50 x .25	.62	1.09	3.54
P0-208	16 (35)											1.44	1.95	4.39
P0-308	20 (43)											2.38	2.80	5.24
P0-110	24 (52)	10.75	10.50	10.00	6.25	$\frac{2.4375}{2.4365}$	.18	.71	4.31	11.69	.50 x .25	.88	1.36	3.89
P0-210	28 (62)											1.88	2.22	4.74
P0-310	33 (72)											2.38	3.07	5.60
P0-111	32 (70)	12.25	12.00	11.37	6.12	$\frac{2.500}{2.499}$	.37	.93	4.88	13.18	.50 x .25	.88	1.58	4.11
P0-211	39 (85)											1.88	2.57	5.09
P0-311	45 (100)											2.62	3.48	6.07



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CLUTCH DRIVING RINGS

Model	Type Ring	J + .000 - .005	R	S	T	U	V	Holes No. Size	Teeth 20° P.A.
P0-108	A	10.38	9.63	8.50	.63	—	—	6 - .41	51 - .75P.
P0-208	B	11.25	10.25		1.44	.38	9.25		
P0-308	B	11.25	10.25		2.38	.38	9.25		
P0-110	A	12.38	11.63	10.50	.88	—	—	8 - .41	63 - .75P.
P0-210	B	13.25	12.50		1.88	.38	11.38		
P0-310	B	13.25	12.50		2.38	.38	11.38		
P0-111	A	13.88	13.13	12.00	.88	—	—	8 - .41	72 - .75P.
P0-211	A	13.88	13.13		1.88	—	—	8 - .41	
P0-311	B	15.50	14.38		2.63	.50	13.00	8 - .53	

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