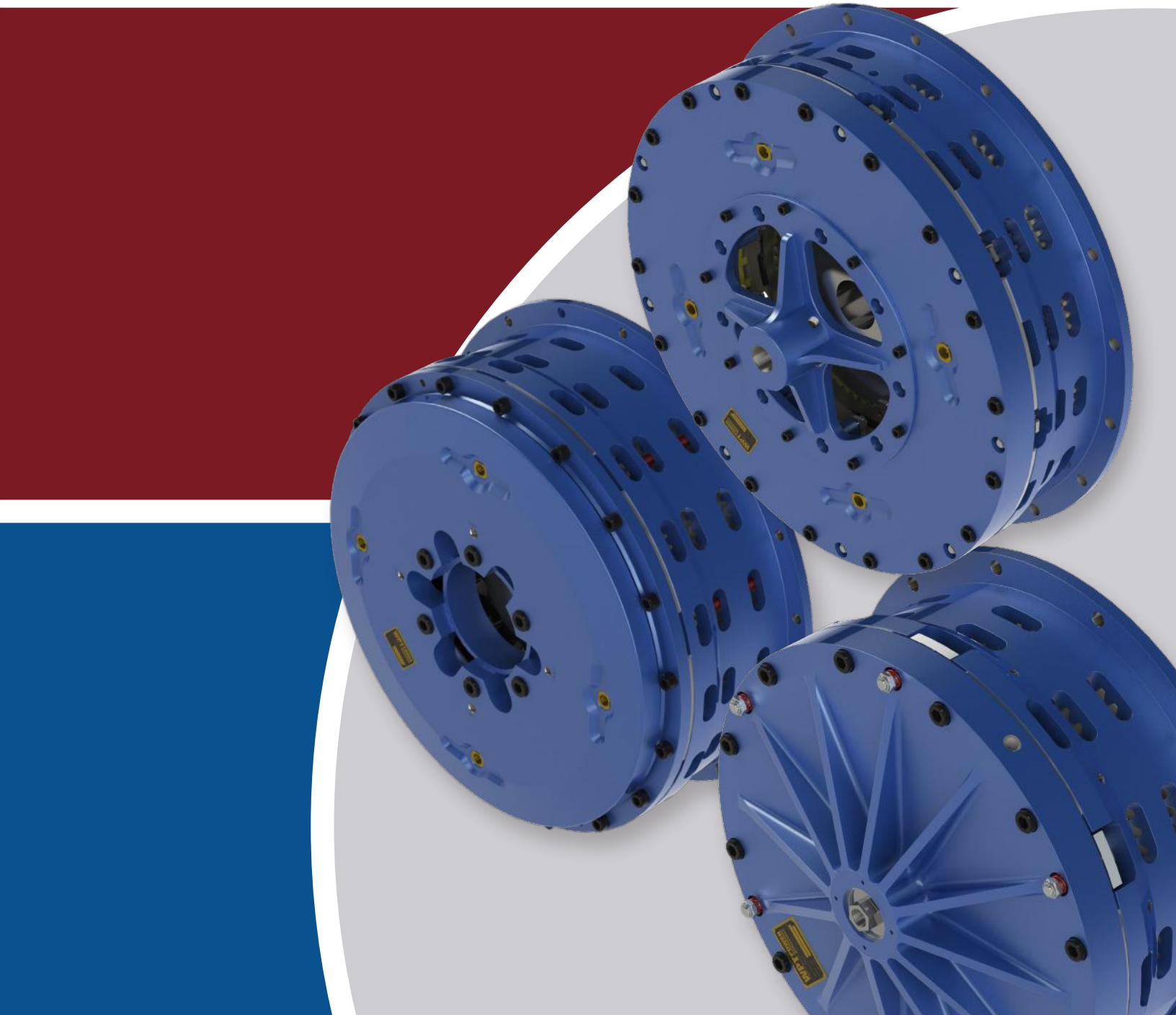
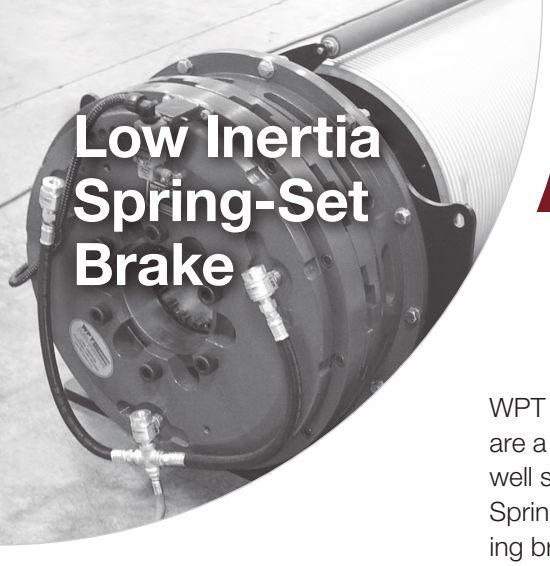
WPT®
POWER

Low Inertia Clutches and Brakes





Low Inertia Spring-Set Brake

WPT Low Inertia (LI) Spring-Set Brakes are a spring-applied / air-release design well suited for fail-safe applications. The LI Spring Set can also be used as a parking brake since no pressure is required to engage the brake. With adjustable spring-release pressures, the LI Spring-Set can provide a range of torques that will suit many applications. WPT's Low Inertia Spring-Set Brakes are available in 1, 2, or 3 plate construction with diameters ranging 6 through 60 inches.

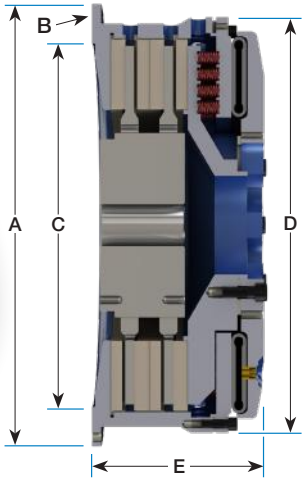
- Hydraulic release available
- High cycle life
- Predictable preventative maintenance
- Slotted, solid and ventilated center plates available
- Marine corrosion protection available
- Type approval certification available: DNV, ABS, ATEX
- *See Power Performance upgrade on page 12*

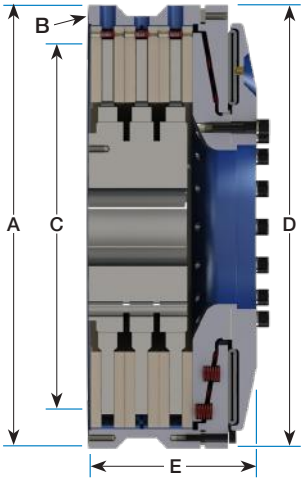
LI SS Brake Specifications

Model	Static Torque Rating at Minimum Release Pressure**			Maximum Speed		Weight and Inertia			Lining Area	Bore Range*	
	60 lbf/in^2 (4.1 bar)	75 lbf/in^2 (5.2 bar)	90 lbf/in^2 (6.2 bar)	Hub & Center Plate	Slip	Total Weight	Hub & Center Plate Weight	Hub & Center Plate Inertia		Minimum	Maximum
	lbf-in (N·m)	lbf-in (N·m)	lbf-in (N·m)	r/min		lb (kg)	lb (kg)	lb·ft^2 (kg·m^2)	in^2 (cm^2)	in (mm)	in (mm)
106	2510 (284)	3130 (354)	3760 (425)	5280	2620	41 (18)	6.7 (3.1)	0.19 (0.0080)	39 (250)	0.88 (22.4)	1.90 (48.3)
206	5020 (567)	6270 (708)	7520 (850)	5280	2620	46 (21)	13 (5.7)	0.37 (0.016)	78 (500)	0.88 (22.4)	1.90 (48.3)
108	4130 (467)	5170 (584)	6200 (701)	4290	1890	70 (32)	9.3 (4.2)	0.46 (0.019)	55 (360)	0.94 (23.9)	2.50 (63.5)
208	7590 (858)	9480 (1070)	11400 (1290)	4290	1890	95 (43)	22 (10)	0.95 (0.040)	110 (710)	1.13 (28.7)	2.50 (63.5)
111	9270 (1050)	11600 (1310)	13900 (1570)	3120	1430	160 (70)	27 (12)	2.3 (0.10)	110 (730)	1.25 (31.8)	2.80 (71.1)
211	17100 (1930)	21400 (2420)	25700 (2900)	3120	1430	190 (87)	51 (23)	4.6 (0.19)	230 (1500)	1.25 (31.8)	2.80 (71.1)
311	23600 (2670)	29500 (3330)	35400 (4000)	3120	1430	240 (110)	75 (34)	2.5 (0.11)	340 (2200)	1.25 (31.8)	2.80 (71.1)
114	15400 (1740)	19300 (2180)	23100 (2610)	2450	1220	250 (120)	45 (21)	5.7 (0.24)	170 (1100)	1.88 (47.8)	3.30 (83.8)
214	28300 (3200)	35400 (4000)	42400 (4790)	2450	1220	310 (140)	83 (38)	11 (0.47)	330 (2100)	1.88 (47.8)	3.90 (99.1)
314	38700 (4370)	48400 (5470)	58100 (6560)	2450	1220	350 (160)	120 (56)	17 (0.7)	500 (3200)	1.88 (47.8)	3.90 (99.1)
116	21500 (2430)	26800 (3030)	32200 (3640)	2140	1080	330 (150)	65 (30)	9.9 (0.42)	230 (1500)	2.13 (54.1)	4.20 (106.7)
216	39700 (4490)	49600 (5600)	59600 (6730)	2140	1080	400 (180)	110 (49)	19 (0.80)	460 (2900)	2.13 (54.1)	4.20 (106.7)
316	54900 (6200)	68600 (7750)	82300 (9300)	2140	1080	490 (220)	180 (79)	34 (1.4)	680 (4400)	2.13 (54.1)	4.20 (106.7)
118	35400 (4000)	44200 (4990)	53100 (6000)	1900	986	460 (210)	65 (30)	13 (0.55)	240 (1500)	2.25 (57.2)	4.90 (124.5)
218	66700 (7540)	83400 (9420)	100000 (11300)	1900	986	560 (260)	150 (67)	33 (1.4)	520 (3300)	2.25 (57.2)	4.90 (124.5)
318	91200 (10300)	114000 (12900)	137000 (15500)	1900	986	660 (300)	180 (83)	38 (1.6)	720 (4600)	2.25 (57.2)	4.90 (124.5)
121	51800 (5850)	64800 (7320)	77700 (8780)	1630	849	750 (340)	190 (84)	23 (0.97)	360 (2300)	2.75 (69.9)	6.30 (160.0)
221	96700 (10900)	121000 (13700)	145000 (16400)	1630	849	860 (390)	270 (120)	39 (1.6)	720 (4600)	2.75 (69.9)	6.30 (160.0)
321	133000 (15000)	166000 (18800)	199000 (22500)	1630	849	930 (420)	270 (120)	71 (3.0)	980 (6300)	2.75 (69.9)	6.30 (160.0)
124H	85100 (9620)	106000 (12000)	126800 (14300)	1430	764	990 (450)	170 (75)	22 (0.91)	580 (3700)	2.75 (69.9)	6.30 (160.0)
224H	158000 (17900)	198000 (22400)	252300 (28500)	1430	764	1100 (490)	280 (130)	110 (5.0)	1200 (7400)	2.75 (69.9)	6.30 (160.0)
324H	220000 (24900)	275000 (31100)	374300 (42300)	1430	764	1400 (630)	400 (180)	170 (7.0)	1700 (11000)	2.75 (69.9)	6.30 (160.0)
227	178000 (20100)	222000 (25100)	267000 (30200)	1270	764	1100 (490)	390 (180)	190 (8.0)	1500 (9400)	3.25 (82.6)	6.30 (160.0)
327	247000 (27900)	309000 (34900)	370000 (41800)	1270	764	1500 (670)	530 (240)	280 (12)	2200 (14000)	3.25 (82.6)	6.30 (160.0)
230H	356000 (40200)	445000 (50300)	534000 (60300)	1140	700	1900 (880)	610 (280)	440 (19)	1700 (11000)	3.50 (88.9)	7.00 (177.8)
330H	480000 (54200)	600000 (67800)	720000 (81300)	1140	700	2400 (1100)	940 (430)	660 (28)	2500 (16000)	3.50 (88.9)	7.00 (177.8)
236	746000 (84300)	687000 (77600)	825000 (93200)	960	619	2800 (1300)	780 (360)	650 (27)	2200 (14000)	5.50 (139.7)	8.40 (213.4)
336	1210000 (137000)	1510000 (171000)	1810000 (205000)	960	619	4000 (1800)	1300 (580)	1000 (44)	3400 (22000)	5.50 (139.7)	8.40 (213.4)
242	796000 (89900)	995000 (112000)	- -	820	527	4400 (2000)	950 (430)	1200 (50)	2700 (17000)	7.50 (190.5)	11.20 (284.5)
342	1140000 (129000)	1420000 (160000)	- -	820	527	4000 (1800)	1500 (680)	1900 (81)	4100 (26000)	7.50 (190.5)	11.20 (284.5)
248	1680000 (190000)	2100000 (237000)	2530000 (286000)	710	512	7600 (3400)	1500 (670)	2000 (82)	4000 (26000)	10.00 (254.0)	14.50 (368.3)
348	2510000 (284000)	3140000 (355000)	3770000 (426000)	710	512	8300 (3700)	2200 (1000)	2800 (120)	6000 (39000)	10.00 (254.0)	14.50 (368.3)
260	3260000 (368000)	- -	- -	570	325	12000 (5500)	2600 (1200)	7100 (300)	7200 (47000)	10.00 (254.0)	18.90 (480.1)
360	4920000 (556000)	- -	- -	570	325	16000 (7400)	5100 (2300)	13000 (540)	11000 (70000)	10.00 (254.0)	18.90 (480.1)
460	5720000 (646000)	- -	- -	570	325	19000 (8800)	6800 (3100)	19000 (790)	15000 (94000)	10.00 (254.0)	18.90 (480.1)

Consult WPT Application Engineering for application assistance, service factors, specifications, and detailed drawings/3D models.
*Contact WPT for larger bore sizes. Listed bore sizes are for square key.
**Dynamic (slipping) Torque is 75% of the Static Torque.

Low Inertia Spring-Set Brake





Size 242-460

LI SS Brake Dimension

Model	Imperial Mounting					Metric Mounting					D	E (Ventilated Center Plate)	E (Ductile Slotted Center Plate)
	A	B			C	A	B			C			
	+0.000/-0.003 (+0.00/-0.08)	Hole Circle	Dia	Qty	+0.003/-0.000 (+0.08/-0.00)	(+0.00/-0.08)	Hole Circle	Dia	Qty	H7			
	in (mm)	in (mm)	in		in (mm)	(mm)	(mm)	(mm)		(mm)	in (mm)	in (mm)	in (mm)
106	8.753 (222.33)	8.00 (203.2)	11/32	4	7.380 (187.45)	(220.00)	(203.0)	(9.0)	4	(190.00)	8 3/4 (223.8)	5.47 (138.94)	- -
206	8.753 (222.33)	8.00 (203.2)	11/32	4	7.380 (187.43)	(220.00)	(203.0)	(9.0)	4	(190.00)	8 3/4 (223.8)	6.59 (167.39)	- -
108	12.125 (307.98)	11.13 (282.6)	17/32	6	8.378 (212.80)	(310.00)	(280.0)	(14.0)	6	(220.00)	9 3/8 (238.1)	5.94 (150.88)	5.50 (139.70)
208	12.125 (307.98)	11.13 (282.6)	17/32	6	8.378 (212.80)	(310.00)	(280.0)	(14.0)	6	(220.00)	9 3/8 (238.1)	7.25 (184.15)	- -
111	16.000 (406.40)	14.75 (374.7)	21/32	6	11.378 (289.00)	(400.00)	(280.0)	(18.0)	6	(289.00)	11 15/16 (303.2)	6.88 (174.75)	- -
211	16.000 (406.40)	14.75 (374.7)	21/32	6	11.378 (289.00)	(400.00)	(375.0)	(18.0)	6	(289.00)	11 15/16 (303.2)	8.69 (220.73)	7.88 (200.15)
311	16.000 (406.40)	14.75 (374.7)	21/32	6	11.378 (289.00)	(400.00)	(375.0)	(18.0)	6	(289.00)	11 15/16 (303.2)	10.44 (265.18)	10.44 (265.18)
114	18.750 (476.25)	17.50 (444.5)	21/32	8	14.378 (365.20)	(470.00)	(445.0)	(18.0)	8	(295.00)	14 3/8 (365.1)	7.94 (201.68)	7.88 (200.15)
214	18.750 (476.25)	17.50 (444.5)	21/32	8	14.378 (365.20)	(470.00)	(445.0)	(18.0)	8	(295.00)	14 3/8 (365.1)	9.81 (249.17)	- -
314	18.750 (476.25)	17.50 (444.5)	21/32	8	14.378 (365.20)	(470.00)	(445.0)	(18.0)	8	(295.00)	14 3/8 (365.1)	11.94 (303.28)	- -
116	21.248 (539.70)	20.00 (508.0)	21/32	12	16.253 (412.83)	(540.00)	(510.0)	(18.0)	12	(412.75)	16 1/4 (414.0)	8.19 (208.03)	8.25 (209.55)
216	21.248 (539.70)	20.00 (508.0)	21/32	12	16.253 (412.83)	(540.00)	(510.0)	(18.0)	12	(412.75)	16 1/4 (414.0)	10.13 (257.30)	10.13 (257.30)
316	21.248 (539.70)	20.00 (508.0)	21/32	12	16.253 (412.83)	(540.00)	(510.0)	(18.0)	12	(412.75)	16 1/4 (414.0)	12.00 (304.80)	- -
118	23.250 (590.55)	22.00 (558.8)	21/32	12	18.253 (463.63)	(590.00)	(560.0)	(18.0)	12	(463.55)	19 3/8 (492.1)	8.81 (223.77)	9.00 (228.60)
218	23.250 (590.55)	22.00 (558.8)	21/32	12	18.253 (463.63)	(590.00)	(560.0)	(18.0)	12	(463.55)	19 3/8 (492.1)	10.75 (273.05)	10.34 (262.64)
318	23.250 (590.55)	22.00 (558.8)	21/32	12	18.253 (463.63)	(590.00)	(560.0)	(18.0)	12	(463.55)	19 3/8 (492.1)	12.56 (319.02)	12.50 (317.50)
121	27.000 (685.80)	25.50 (647.7)	21/32	12	21.378 (543.00)	(685.00)	(648.0)	(18.0)	12	(540.00)	21 5/16 (541.3)	9.81 (249.17)	- -
221	27.000 (685.80)	25.50 (647.7)	21/32	12	21.378 (543.00)	(685.00)	(648.0)	(18.0)	12	(540.00)	21 5/16 (541.3)	11.94 (303.28)	11.94 (303.28)
321	27.000 (685.80)	25.50 (647.7)	21/32	12	21.378 (543.00)	(685.00)	(648.0)	(18.0)	12	(540.00)	21 5/16 (541.3)	14.19 (360.43)	13.81 (350.77)
124H	30.000 (762.00)	28.75 (730.3)	21/32	12	24.378 (619.20)	(760.00)	(730.0)	(18.0)	12	(620.10)	27 (685.8)	9.69 (246.13)	9.88 (250.95)
224H	30.000 (762.00)	28.75 (730.3)	21/32	12	24.378 (619.20)	(760.00)	(730.0)	(18.0)	12	(620.10)	27 (685.8)	11.94 (303.28)	12.00 (304.80)
324H	30.000 (762.00)	28.75 (730.3)	21/32	12	24.378 (619.20)	(760.00)	(730.0)	(18.0)	12	(620.10)	27 (685.8)	14.25 (361.95)	14.00 (355.60)
227	32.750 (831.85)	31.50 (800.1)	21/32	16	27.378 (695.40)	-	-	-	-	-	27 (685.8)	12.63 (320.80)	12.63 (320.80)
327	32.750 (831.85)	31.50 (800.1)	21/32	16	27.378 (695.40)	-	-	-	-	-	27 (685.8)	15.00 (381.00)	- -
230H	37.000 (939.80)	35.50 (901.7)	25/32	18	30.378 (771.60)	(940.00)	(900.0)	(22.0)	18	(775.08)	32 (812.8)	14.50 (368.30)	14.25 (361.95)
330H	37.000 (939.80)	35.50 (901.7)	25/32	18	30.378 (771.60)	(940.00)	(900.0)	(22.0)	18	(775.08)	32 (812.8)	17.88 (454.15)	17.88 (454.15)
236	43.500 (1104.90)	42.00 (1066.8)	25/32	18	36.378 (924.03)	(1105.00)	(900.0)	(22.0)	18	(925.00)	38 1/4 (971.6)	15.30 (388.62)	15.31 (388.87)
336	43.500 (1104.90)	42.00 (1066.8)	25/32	16	36.378 (924.00)	(1105.00)	(900.0)	(22.0)	18	(925.00)	38 1/4 (971.6)	- -	- -
242*	49.000 (1244.60)	46.50 (1181.1)	1" - 8 NC	24	45.000 (1143.08)	-	-	-	-	-	44 1/8 (1120.8)	- -	- -
342*	49.000 (1244.60)	46.50 (1181.1)	1" - 8 NC	24	45.000 (1143.08)	-	-	-	-	-	44 1/8 (1120.8)	- -	15.63 (397.00)
248*	56.750 (1441.45)	54.00 (1371.6)	1" - 8 NC	24	52.000 (1220.17)	(1600.00)	(1540.0)	(26.0)	24	(1220.00)	52 1/8 (1324.0)	18.38 (466.85)	17.69 (449.33)
348*	56.750 (1441.45)	54.00 (1371.6)	1" - 8 NC	24	52.000 (1320.93)	(1600.00)	(1540.0)	(26.0)	24	(1220.00)	52 1/8 (1324.0)	20.88 (530.35)	22.03 (559.56)
260*	70.500 (1790.70)	66.50 (1689.1)	2" - 4.5NC	24	62.760 (1594.10	-	-	-	-	-	61 1/2 (1562.1)	- -	- -
360*	70.500 (1790.70)	66.50 (1689.1)	2" - 4.5NC	24	62.760 (1594.10)	-	-	-	-	-	61 1/2 (1562.1)	- -	27.00 (685.80)
460*	70.500 (1790.70)	66.50 (1689.1)	2" - 4.5NC	24	62.760 (1594.10)	-	-	-	-	-	61 1/2 (1562.1)	- -	31.50 (800.10)

Consult WPT Application Engineering for application assistance, service factors, specifications, and detailed drawings/3D models.
*Shipped without backplate.

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ARTEN FREIOS & EMBREAGENS LTDA
Fone: 11 5594-8333
E-mail: arten@arten.com.br
Internet: www.arten.com.br

WPT Power Corporation
1600 Fisher Road
Wichita Falls, Texas 76305
U.S.A.

P.O. Box 8148
Wichita Falls, Texas 76307

+1 940-761-1971 Phone
WPTpower.com

WPT Power (Shanghai) Ltd.
No. 3-4 Building
669 MinTa Road
Songjiang, Shanghai, PRC
201617

+86-21-57847560 Phone
WPTpower.cn

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