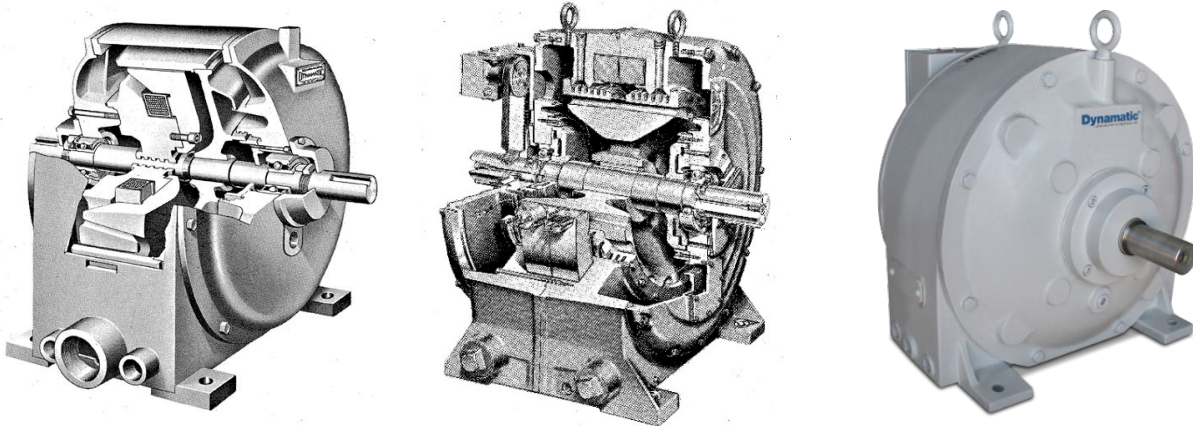


BRAKES

Water-Cooled Brakes

Model WB-620 through 6313 Brakes



Typical WB-620 through WB-640 Typical WB-6163 through 6313

Description

Infinitely adjustable braking for many varied applications is achieved with Dynamatic® eddy current brakes. These liquid cooled brakes operate on the same principle of torque development employed in eddy current drives and couplings. Eddy-currents are generated on the smooth surface of the rotor, which rotates through the magnetic field produced by the stationary field assembly. The interaction between the eddy-current field and the poles of the field assembly produces a braking torque on the rotor. The torque, which varies directly with the field coil current and the speed of the rotor, may be infinitely and accurately adjusted by the control system to suit the requirements of the application. Since braking torque is developed by an electromagnetic reaction between separate members there are no friction members — discs, bands, or linings — to wear and require replacement or adjustment. Dynamatic® brakes have numerous applications in all industries where absorption of power is required. In all industries, rapid, shockless, stopping of rotating equipment with eddy-current brakes protects delicate machine parts in long power trains. Eddy current brakes boost production on applications by reducing slow down time between cycles of operation. Twenty-two standard models of liquid cooled brakes are available with continuous heat dissipation capacities from 40 Hp through 4000 Hp. The completely enclosed liquid cooled brakes are protected against most adverse ambient conditions. All liquid cooled brakes are furnished complete with automatic water piping systems that maintain correct operating temperature and conserve cooling water. Many control features are available for eddy-current brakes, including constant tension control for maintaining web or strip tensions in processing paper, textiles, film and foil. Controllers are sold separately.

BRAKES

Water-Cooled Brakes

Model WB-620 through 6313 Brakes

Maximum Speed RPM	Sales Part Number WB
1800	WC-620-02
5000	WC-620-03
1800	WC-630-02
4400	WC-630-03
1800	WC-640-02
4400	WC-640-03
3450	WC-006163-0002 WC-006164-0002 WC-006165-0002
2600	WC-006172-0002 WC-006173-0002
2300	WC-006192-0002 WC-006193-0002
2050	WC-006212-0002 WC-006213-0002
1650	WC-006232-0002 WC-006233-0002
1650	WC-006252-0002 WC-006253-0002
725	WC-006272-0002 WC-006273-0002
600	WC-006292-0002 WC-006293-0002
500	WC-006312-0002 WC-006313-0002

BRAKES

Water-Cooled Brakes

Ratings, Models WB-620 through WB-6313

Model WB-	Torque (Lbs. Ft.)					Speed RPM			Therm. Cap. HP ²	WK ² Lb. Ft. Sq.	Con-troller Size	Size Supply Line ³	Approx. Ship. Weight Lbs.
	@ 100 RPM	@ 200 RPM	@ 500 RPM	@ 900 RPM	Peak	Max. RPM ¹	Normal Max. RPM	Therm. Limit Speed					
620	60	80	105	125	130	5000	1800	1600	40	8.5	1	½	276
630	150	200	210	215	225	4400	1800	1400	60	14	1	½	391
640	250	330	390	380	400	4400	1800	1310	100	30	2	¾	535
6163	710	1175	1750	2000	2100	4675	3450	1700	625	82	3	1 ½	1650
6164	920	1525	2225	2400	2400			1400			4		
6165	1150	1700	2425	2650	2650			1400			4		
6172	1275	1900	2600	2800	2800	3900	2600	1500	750	116	4	2	2600
6173	1540	2300	3400	3150	3500			1500					
6192	1800	2750	3900	4375	4400	3500	2300	1050	900	175	4	2	3400
6193	2300	3500	5100	4800	5200			1000					
6212	3375	4850	6900	7500	7500	3100	2050	950	1350	277	7	2 ½	4500
6213	4225	6000	8100	8100	8700			850					
6232	5050	6900	9100	9500	9600	2500	1650	800	1450	538	8	2 ½	7400
6233	6300	8500	10500	10100	10700			720					
6252	9200	11700	13200	12900	13200	2500	1650	800	2000	824	8	3	8350
6253	11700	14500	14900	11700	15300			900					
6272	18500	20500	20500	19000	21000	1800	725	500	2250	2300	9	3	13500
6273	20000	23000	21500	17000	23000			580					
6292	30000	30000	31500	29000	32000	1500	600	500	3000	4715	9	3 ½	20500
6293	34500	37500	36100	32000	37500			450					
6312	46000	47000	45700	44500	47000	1300	500	450	4000	9350	10	4	27500
6313	51000	54000	52000	47000	55000			400					

Ratings, Models WB-620 through WB-6313

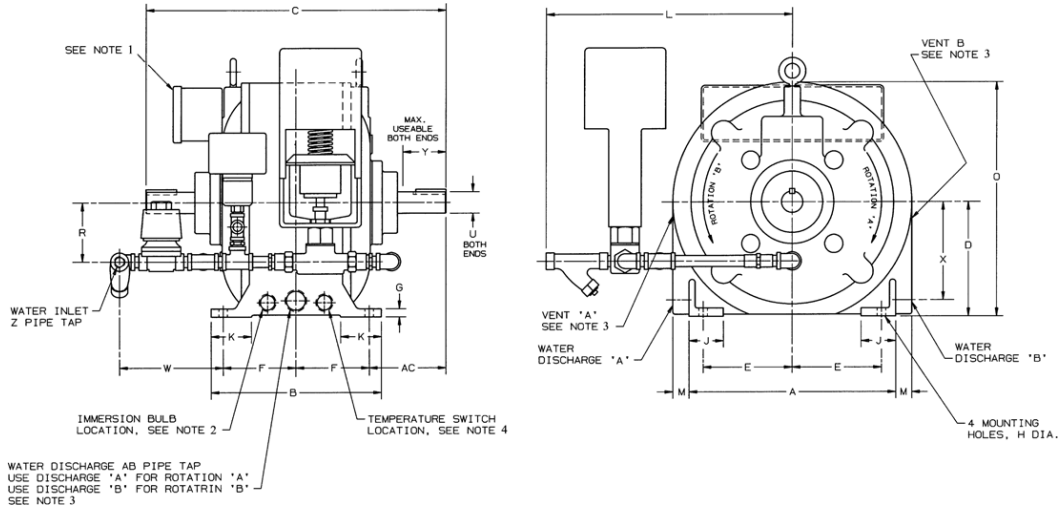
Model WB-	Output End Overhung Loads (Lbs.) at RPM of: ⁴			
	900	1200	1800	3600
620	495	440	390	310
630	960	870	755	600
640	965	880	765	600
6163				
6164	1430	1295	1125	860
6165				
6172	2145	1945	1680	1285
6173				
6192	2490	2260	1950	-
6193				
6212	3010	2715	2330	-
6213				
6232	These units for direct coupling only. Do not belt.			
6233				
6252				
6253				
6272				
6273				
6292				
6293				
6312				
6313				

Notes:

- Models WB-6163 and larger are supplied with oil lubricated bearings at these speeds.
- Thermal Hp absorption capacity is shown in this column. When selecting a brake for an application, check the maximum required absorption with this formula: HP + RPM X Torque divided by 5252. Then compare the value given in the above table with the maximum Hp to be absorbed at any point in the operating range of the brake.
- This column shows the diameter of the coolant supply line in inches.
- These figures are maximum allowable at tie center of a standard shaft keyway and in a downward direction for standard units.

BRAKES

**Water-Cooled Brakes
1.5 through 100 HP
Outline Dimensions – WC-6163 through WC-6293**



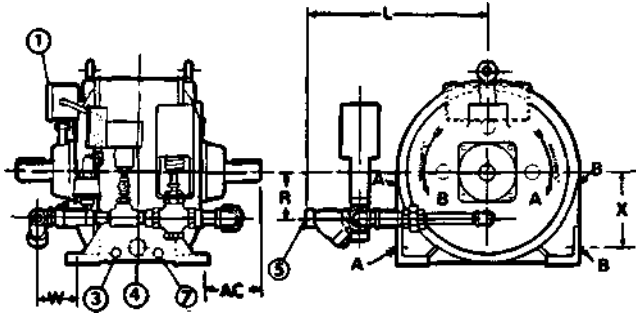
Dimensions - Inches

Model WB-	A	B	C	D	E	F	H	N	O	T	U	Print Number
6163 6164 6165	25.00	20.00	31.25	13.50	10.50	8.75	1.00	5.06	26.22	4.50	2.25	C54342/B
6172 6173	28.00	21.50	33.00	14.50	12.00	9.50	1.12	5.62	29.31	4.75	3.00	
6192 6193	30.00	22.00	33.88	17.25	13.00	9.50	1.12	4.88	34.00	5.00	3.38	
6212 6213	32.00	27.12	40.88	17.25	14.00	12.06	1.12	5.88	34.25	5.50	3.75	
6232 6233	40.00	36.00	50.00	22.00	17.00	16.00	1.25	7.18	42.12	6.50	4.38	C54343/F
6252 6253	40.00	42.00	56.50	24.00	17.00	19.00	1.25	7.44	44.12	6.75	4.50	
6272 6273	48.00	48.00	65.50	29.00	20.50	21.50	1.44	7.50	53.12	7.50	5.00	C56515/D
6292 6293	56.00	54.00	72.50	33.00	24.00	24.00	1.44	9.38	61.00	9.00	6.00	
6312 6313	62.00	65.00	88.75	37.00	26.00	28.00	1.62	15.00	68.25	13.50	7.00	

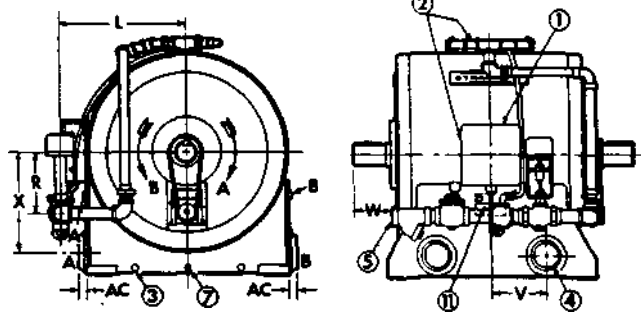
BRAKES

**Water-Cooled Brakes
1.5 through 100 HP**

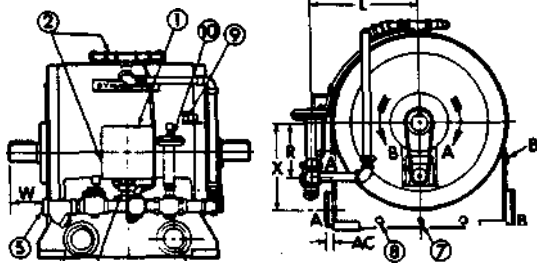
Models WB-6163-6213 (Figure A)



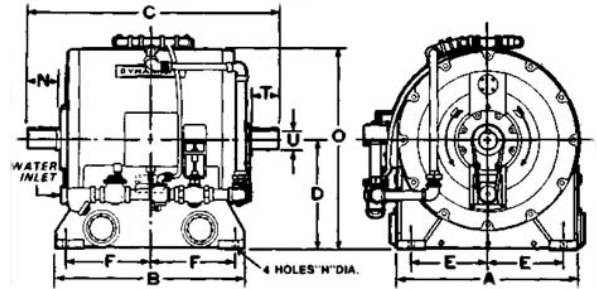
Models WB-6232-6253 (Figure B)



Models WB-6272-6313 (Figure C)



Models WB-6163-6313



Model No.	L	R	V	W	X	Z	AB	AC	Print No.	Figure No.
6163 6164 6165	25.00	762	3.75	3.00	10.68	1.50	3.00	1.56	C54342/B	A
6172 6173	31.50	8.00	5.88	2.25	11.62	2.00	2.00	1.56		
6192 6193	31.50	8.00	6.00	2.75	14.12	2.00	3.50	1.62		
6212 6213	33.00	10.00	8.50	6.50	14.12	2.50	3.50	1.62		
6232 6233	27.00	12.25	7.50	4.00	18.00	2.50	6.00	1.44	C54343/F	B
6252 6253	28.00	11.00	10.50	2.25	19.62	3.00	6.00	1.50		
6272 6273	31.00	13.25	13.25	12.50	23.25	3.00	6.00	3.50	C56515/D	C
6292 6293	-	18.50	13.75	-	26.00	3.50	8.00	4.00		
6312 6313	-	19.00	15.00	-	29.75	4.00	8.00	4.00		

NOTES:

- ① Water piping, clutch field and tachometer generator leads junction box.
- ② Piping and junction box furnished opposite standard on request.
- ③ 1 inch pipe tap immersion bulb.
- ④ Water discharge AB pipe tap: Use water discharge A for rotation A and discharge B for rotation B. Both discharge ports must be open on the side being used for drain.
- ⑤ Water inlet Z pipe tap.
- ⑥ Location of modulating valve and piping for Models WB-6172, 6173, 6192 & 6193 as shown by dotted lines.
- ⑦ Temperature switch location (far end).
- ⑧ Water control Accritem; must be mounted in water discharge side of machine.
- ⑨ Air supply inlet: 1/8 P.T. for water piping controls: 30 P.S.I. minimum.
- ⑩ Air operated flowrite valve.
- ⑪ Vent cover must be in position A for rotation A and in position B for rotation B.