Electric Wiring Chart

Required Electrical Power Information

A separate branch circuit with a main disconnect device supplied by the owner is required to supply power to compactor and baler power units. The installation of the main disconnect must be performed by a qualified electrician in compliance with all local and National Electrical Code regulations. ANSI standards require that the main "disconnected shall be located within sight of, and no more than 50' feet away from the main control panel". The actual voltage must be within +/- 5% of the nameplate rating on the motor when the unit is operating at the system relief pressure. The following table lists minimum and recommended fuse and wire sizes for the various motors used on compaction and baling equipment manufactured by Wastequip, Inc.

Motor Horsepower Rating Phase	Line Supply Voltage	Full Load Amps[1]	Locked Rotor Amps[2]	Maximum Dual Element Time Delay Fuse[3]	Maximum Inverse Time Circuit Breaker[3]	Minimum Disconnect Rating[4]	Minimum Wire Size THHN CU 90°C / 194°F[5]			Recommended Wire Size * Denotes same as minimum		
							100'	200'	300'	100'	200'	300'
2HP 1 Phase	115/60Hz	24	144	45	60	30	12	10	8	*	*	*
	208/60Hz	13.2	80	25	35	30	12	12	12	*	*	*
	230/60Hz	12	72	25	30	30	12	12	12	*	*	*
3HP 1 Phase	15/60Hz	34	204	60	90	60	8	6	4	*	*	*
	208/60Hz	18.7	113	35	50	30	12	12	10	*	*	*
	230/60Hz	17	102	30	50	30	12	12	10	*	*	*
5HP/1 Phase	230/60Hz	28	168	50	70	60	10	8	6	*	*	*
10HP/1 Phase	230/60Hz	50	300	90	125	60	6	4	2	*	*	*
3HP 3 Phase	208/60Hz	10.6	71	20	30	30	12	12	12	*	*	*
	230/60Hz	9.6	64	20	25	30	12	12	12	*	*	*
	460/60Hz	4.8	32	10	15	30	12	12	12	*	*	*
	575/60Hz	3.9	25.6	10	10	30	12	12	12	*	*	*
5HP 3 Phase	208/60Hz	16.7	102	30	50	30	12	12	10	10	8	8
	230/60Hz	15.2	92	30	40	30	12	12	10	10	8	8
	460/60Hz	7.6	46	15	20	30	12	12	12	*	10	10
	575/60Hz	6.1	36.8	15	20	30	12	12	12	*	10	10
10HP 3 Phase	200/60Hz	32.2	186.3	60	90	60	8	6	4	*	*	*
	208/60Hz	30.8	179	60	80	60	10	8	6	*	*	*
	230/60Hz	28	162	50	70	60	10	8	6	*	*	*
	460/60Hz	14	81	25	35	30	12	12	12	*	10	8
	575/60Hz	11	64.8	20	30	30	12	12	12	*	10	10
15HP 3 Phase	200/60Hz	48.3	267	90	125	60	6	4	3	*	*	*
	208/60Hz	46.2	257	90	125	60	6	4	3	*	*	2
	230/60Hz	42	232	80	125	60	8	6	4	6	4	2
	460/60Hz	21	116	40	70	30	12	10	8	10	8	6
	575/60Hz	17	93	30	50	30	12	12	10	10	10	8
20HP 3 Phase	200/60Hz	62.1	334	110	175	100	4	3	2	*	*	*
	208/60Hz	59.4	321	110	150	100	6	4	3	4	2	2
	230/60Hz	54	290	100	150	100	6	4	3	4	2	2
	460/60Hz	27	145	50	70	60	10	8	6	8	6	4
	575/60Hz	22	116	40	60	30	12	10	8	10	8	6
30HP 3 Phase	200/60Hz	92	500	175	250	150	2	1	1/0	*	*	*
	230/60Hz	80	435	150	200	100	3	2	1	2	1/0	1/0
	460/60Hz	40	218	70	100	60	8	6	4	6	2	2
	575/60Hz	32	174	60	80	60	10	8	6	8	4	4
40HP 3 Phase	200/60Hz	120	667	225	300	150	1	1/0	2/0	*	*	*
	230/60Hz	104	580	200	300	150	2	1	1/0	*	*	*
	460/60Hz	52	290	100	150	60	6	4	3	*	*	*
	575/60Hz	41	232	80	125	60	8	6	4	*	*	*

1. Values for single phase motors obtained from Table 430.248 of 2005 NEC. Values for three phase motors obtained from Table 430.251(A) of 2005 NEC.

2. Values for single phase motors obtained from Table 403.250 of 2005 NEC. Values for three phase motors obtained from Table 430.251(B) of 2005 NEC.

3. Maximum fuse values are based on full load x 175% (300% for class CC) as determined from Table 430.152 of 2005 NEC. Maximum inverse time circuit breaker values are based on full load current x 250% as determined from Table 430.152 of the 2005 NEC. The fuse / breaker and wire sizes must always meet or exceed any federal, state, or local electrical codes or ordinances.

4. Minimum disconnect rating is based on full load current x 115% as determined from Article 430.110 of 2005 NEC.It is the owner's/installer's responsibility to verify disconnect used is rated for correct horsepower motor at supply voltage used.

5. Wire size based on motor full load current x 125% and ampacity of 90 degrees THHN cooper wire found in Table 310.16 of the 2005 NEC. Wire must not introduce more than 5% voltage drop. Check federal, state, or local electrical codes or ordinances.