

FACTSHEET

Severe Duty

ECP5000 series motors

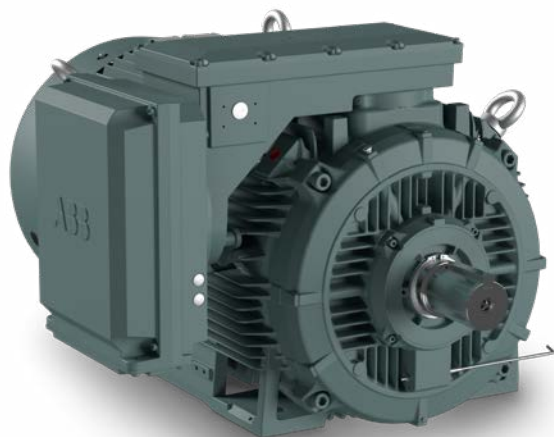


ABB ECP5000 series Severe Duty motors provide exceptional performance and maximize uptime in harsh industrial processing applications. ECP5000 motors are designed to protect against contamination, moisture, vibration and demanding duty cycles while providing enhanced connection and safety features not typically seen in other motors of this style.



Motor features

- 250 Hp - 900 Hp, 460V/60Hz, 400/690V/50Hz; 250 Hp - 500 Hp, 575/600V/60Hz
- Div 2, Class I, Groups A, B, C, D
- Div 2, Class II, Groups F & G
- Designed in the US to meet specific requirements of industrial processing applications
- Stocked in the US for fast delivery
- Industry standard 5008/5010/5012 frame critical mounting dimensions
- 1.15 service factor (unless otherwise noted)
- Inverter ready with insulated NDE bearing to mitigate unwanted bearing currents
- Smart Sensor compatible
- Painting system C3M according to ISO 12944-5
- 100/120V space heater as standard to prevent condensation (terminated in main conduit box)
- Heat-resistant PolyUrea grease
- UL/cUL certified
- 3 year warranty



Ease of use

- Large (approx. 16.2" x 20.6" x 7.5"), LHS (F1) mounted conduit box, rotatable in 90 degree increments and convertible to RHS (F2) or top (F3) mount using standard ABB components
- Terminal block for easy and convenient cable connections
- Integrated vibration probe landing points on both ends for simple vibration checks
- Grease reliefs on both ends enable quick and simple regreasing of the bearings



Reliability

- Robust IP66 enclosure
- High torque, design A profile provides the power to get the job done
- Class F insulation with Class B temperature limits to withstand harsh conditions
- Bolted lead terminations provide lead separation and reduce vibration at typical failure points
- Provisions for bearing RTDs (Pt-100, 3 wire) on both ends
- Ball bearings for direct coupled loads:
 - DE: ball bearing; axially locked as standard (capability to modify to roller bearing)
 - NDE: 6316 insulated ball bearing
- Pt-100 3-wire (RTDs) in stator winding, 2 per phase, terminated in main conduit box
- PTC thermistors, in stator winding, 1 per phase, terminated in main conduit box



Safety

- Equipped with (3) lift lugs & (5) lifting location points - safer handling, manipulation and installation of motor
- All 2-pole motors are balanced to Grade B* to provide a quieter and smoother running motor at higher speeds
- 400-900HP 2-pole motors have strengthened shaft material (42CrMo4 equivalent to 4140)

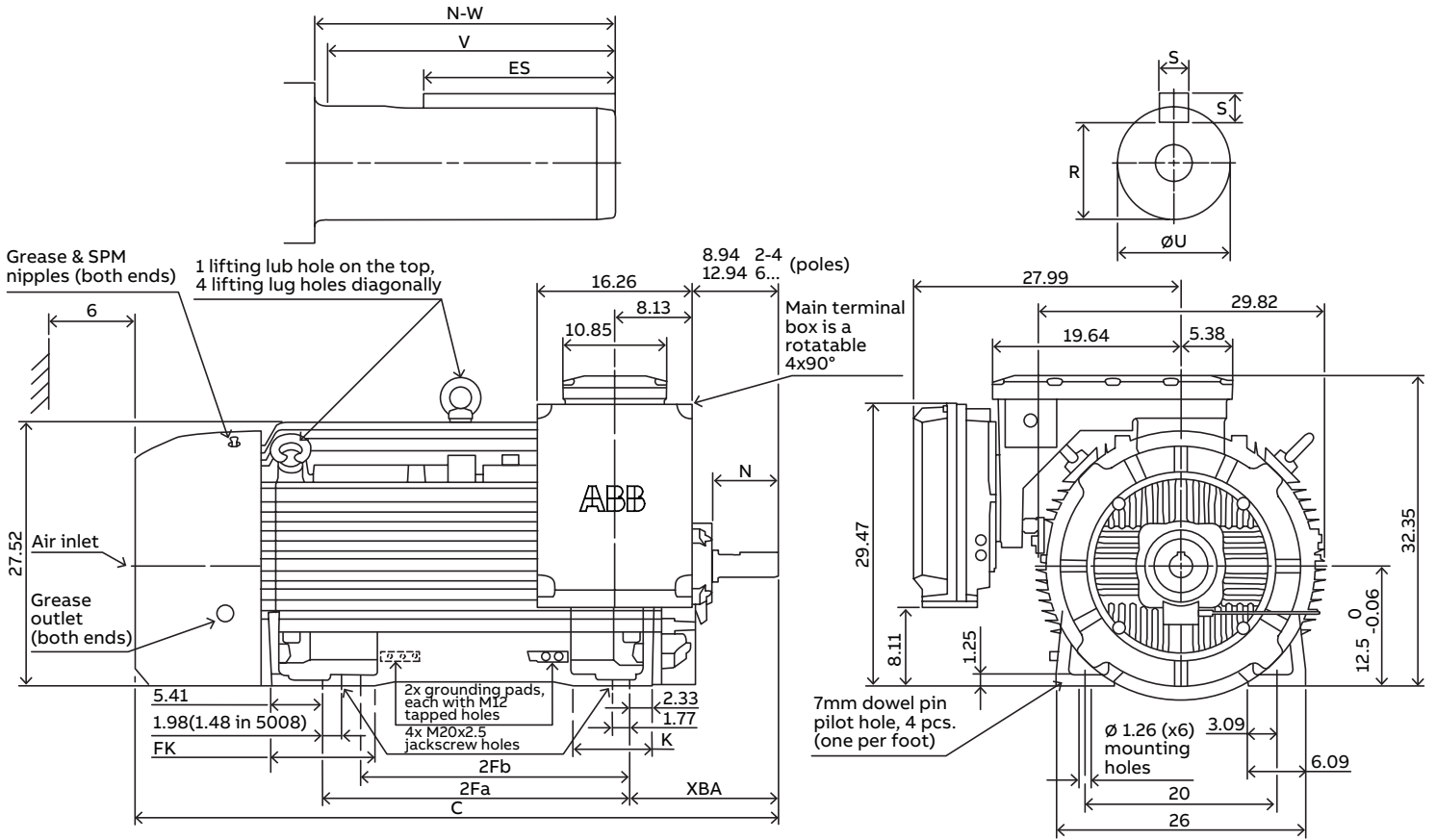
*Grade B vibration class designates velocity below 1.8mm/sec (.07 in/sec)

Hp	RPM	NEMA frame	Catalog number	Disc. sym.	Service factor	Voltage	"C" dim.	Aprx. wt. (lb.)	Full load eff. %	Full load amps	Full load torque	LRT %	BDT %
Technical data 460V/60Hz **													
250	1200	5008	ECP502506-PP	ISD	1.15	460	64.15	3682	95.8	296	1101	240	240
	3600	5008	ECP503002-PP	ISD	1.15	460	60.15	3791	95.8	327	440	180	300
300	1800	5008	ECP503004-PP	ISD	1.15	460	60.15	3902	96.2	330	869	200	270
	1200	5010	ECP503006-PP	ISD	1.15	460	71.04	4277	95.8	356	1322	240	240
	900	5010	ECP503008-PP	ISD	1.15	460	67.05	4564	95.0	369	1764	160	300
350	3600	5008	ECP503502-PP	ISD	1.15	460	60.15	4012	95.8	380	505	220	320
	1800	5008	ECP503504-PP	ISD	1.15	460	60.15	3902	96.2	397	1025	230	310
	1200	5010	ECP503506-PP	ISD	1.15	460	71.04	4607	95.8	416	1542	270	320
	900	5012	ECP503508-PP	ISD	1.15	460	74.00	5291	95.0	437	2056	170	330
400	3600	5010	ECP504002-PP	ISD	1.15	460	67.04	4431	95.8	439	584	270	380
	1800	5008	ECP504004-PP	ISD	1.15	460	60.15	4299	96.2	462	1172	310	420
	1200	5012	ECP504006-PP	ISD	1.15	460	79.03	5005	95.8	476	1764	270	280
	900	5012	ECP504008-PP	ISD	1.15	460	74.00	5667	95.0	480	2355	150	290
450	3600	5010	ECP504502-PP	ISD	1.15	460	67.04	4431	95.8	490	659	240	350
	1800	5010	ECP504504-PP	ISD	1.15	460	67.04	4564	96.2	511	1321	270	370
	1200	5012	ECP504506-PP	ISD	1.15	460	79.03	5445	95.8	534	1983	270	330
	900	5012	ECP504508-PP	ISD	1.15	460	74.00	5886	95.0	560	2651	160	340
500	3600	5010	ECP505002-PP	ISD	1.15	460	67.04	4431	95.8	542	732	220	280
	1800	5010	ECP505004-PP	ISD	1.15	460	67.04	4564	96.2	561	1469	250	330
	1200	5012	ECP505006-PP	ISD	1.15	460	79.03	5754	95.8	606	2201	270	320
	900	5012	ECP505008-PP	ISD	1.15	460	74.00	5886	95.0	610	2952	150	310
600	3600	5010	ECP506002-PP	ISD	1.15	460	67.04	4652	95.8	660	878	280	360
	1800	5012	ECP506004-PP	ISD	1.15	460	75.03	5225	96.2	676	1760	260	260
	1200	5012	ECP506006-PP	ISD	1.15	460	79.03	5887	95.8	720	2643	240	300
	3600	5010	ECP506502-PP	ISD	1.15	460	67.04	4785	95.8	696	951	260	400
650	1800	5012	ECP506504-PP	ISD	1.15	460	75.03	5203	96.2	731	1908	270	320
	1200	5012	ECP506506-PP	ISD	1.15	460	79.03	5887	95.8	769	2856	220	280
	3600	5010*	ECP507002-PP	ISD	1.00	460	67.04*	*	*	*	*	*	*
700	1800	5012	ECP507004-PP	ISD	1.15	460	79.03	5688	96.2	765	2055	230	280
	1200	5012	ECP507006-PP	ISD	1.00	460	79.03	5887	95.8	824	3090	210	260
750	1800	5012	ECP507504-PP	ISD	1.15*	460	79.03	5688	96.2	831	2202	250	320
800	3600	5012	ECP508002-PP	ISD	1.15*	460	*	*	*	*	*	*	*
	1800	5012	ECP508004-PP	ISD	1.00	460	79.03	5931	96.2	925	2351	260	260
900	3600	5012	ECP509002-PP	ISD	1.00	460	*	*	*	*	*	*	*
	1800	5012	ECP509004-PP	ISD	1.00	460	79.03	6330	96.2	1020	2638	300	430

*Pending final testing

** 50Hz technical data available upon request

Hp	RPM	NEMA frame	Catalog number	Disc. sym.	Service factor	Voltage	"C" dim.	Aprx. wt. (lb.)	Full load eff. %	Full load amps	Full load torque	LRT %	BDT %
Technical data 575V/60Hz													
250	1200	5008	ECP502506-5PP	ISD	1.15	575	64.15	3682	95.8	237	1103	230	230
	3600	5008	ECP503002-5PP	ISD	1.15	575	60.15	3792	95.8	265	440	170	260
300	1800	5008	ECP503004-5PP	ISD	1.15	575	60.15	3902	96.2	266	880	200	270
	1200	5010	ECP503006-5PP	ISD	1.15	575	71.04	4277	95.8	287	1321	250	250
	3600	5008	ECP503502-5PP	ISD	1.15	575	60.15	4012	95.8	305	513	220	320
350	1800	5008	ECP503504-5PP	ISD	1.15	575	60.15	3902	96.2	320	1026	230	310
	1200	5010	ECP503506-5PP	ISD	1.15	575	71.04	4608	95.8	331	1541	250	300
	3600	5010	ECP504002-5PP	ISD	1.15	575	67.04	4431	95.8	348	586	240	390
400	1800	5008	ECP504004-5PP	ISD	1.15	575	60.15	4299	96.2	367	1173	260	400
	1200	5012	ECP504006-5PP	ISD	1.15	575	79.03	5004	95.8	377	1763	250	260
	3600	5010	ECP504502-5PP	ISD	1.15	575	67.04	4431	95.8	390	660	220	370
450	1800	5010	ECP504504-5PP	ISD	1.15	575	67.04	4564	96.2	407	1320	230	350
	1200	5012	ECP504506-5PP	ISD	1.15	575	79.03	5445	95.8	424	1982	250	310
	3600	5010	ECP505002-5PP	ISD	1.15	575	67.04	4431	95.8	433	734	200	300
500	1800	5010	ECP505004-5PP	ISD	1.15	575	67.04	4564	96.2	447	1468	210	320
	1200	5012	ECP505006-5PP	ISD	1.15	575	79.03	5754	95.8	482	2200	270	320



Frame	Poles	C	XBA	2Fa	2Fb	FK	K	N	ØU	S	ES	R	V	N-W
5008	2	60.15	15.50	25.00	22.00	9.95	8.22	6.86	2.375	0.625	4.00	2.021	6.00	6.25
5008	4	60.15	15.50	25.00	22.00	9.95	8.22	6.90	4.125	1.000	5.00	3.563	6.00	6.25
5008	6,8	64.15	19.50	25.00	22.00	9.95	8.22	10.90	4.500	1.000	8.00	3.944	10.00	10.25
5010	2	67.04	15.50	32.00	28.00	10.86	8.22	6.86	2.375	0.625	4.00	2.021	6.00	6.25
5010	4	67.04	15.50	32.00	28.00	10.86	8.22	6.90	4.125	1.000	5.00	3.563	6.00	6.25
5010	6,8	71.04	19.50	32.00	28.00	10.86	8.22	10.90	4.500	1.000	8.00	3.944	10.00	10.25
5012	4	75.03	15.50	40.00	36.00	10.86	8.22	6.90	4.125	1.000	5.00	3.563	6.00	6.25
5012	6,8	79.03	19.50	40.00	36.00	10.86	8.22	10.90	4.500	1.000	8.00	3.944	10.00	10.25

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