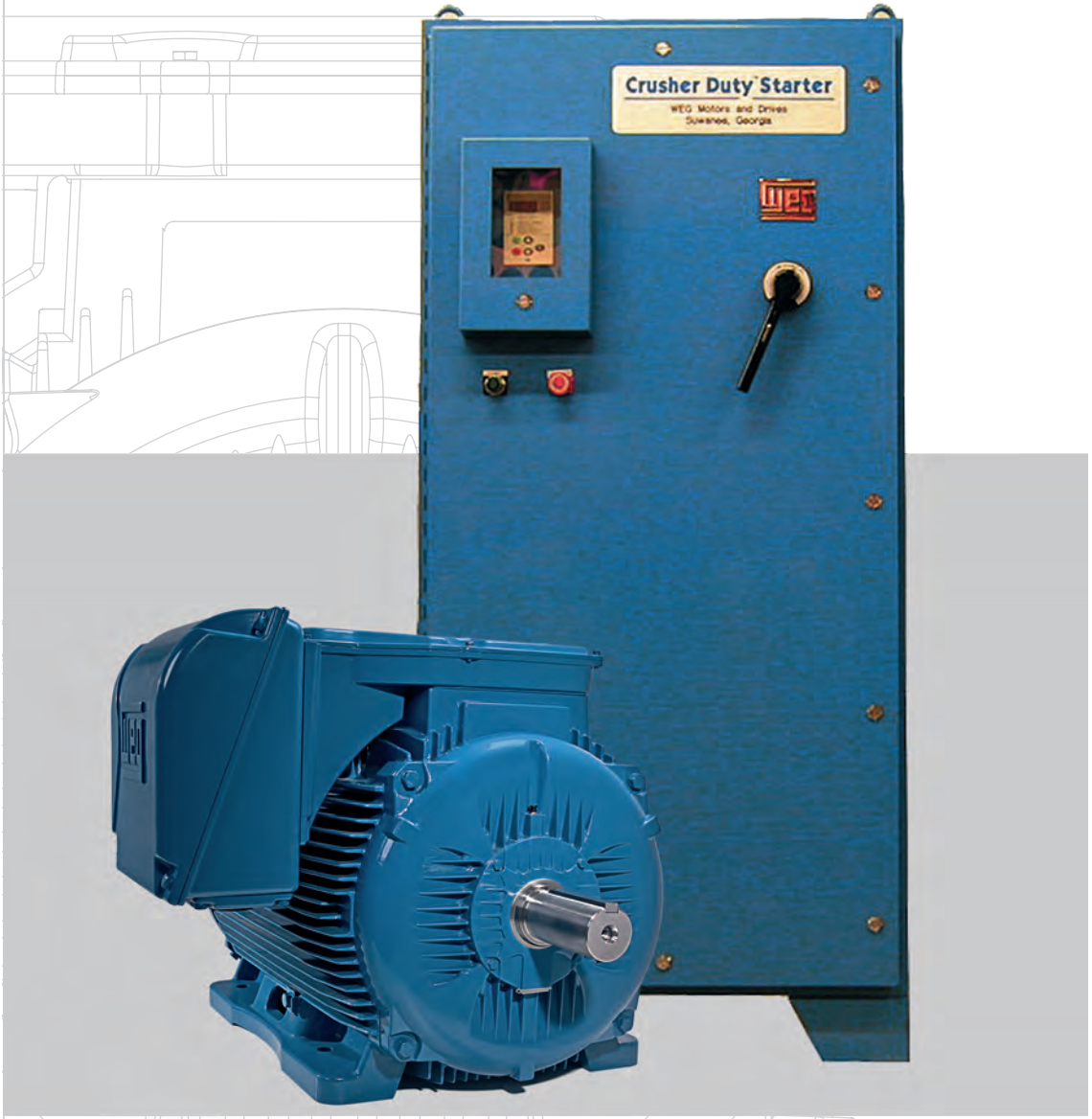
Crusher Duty

Three Phase Motor

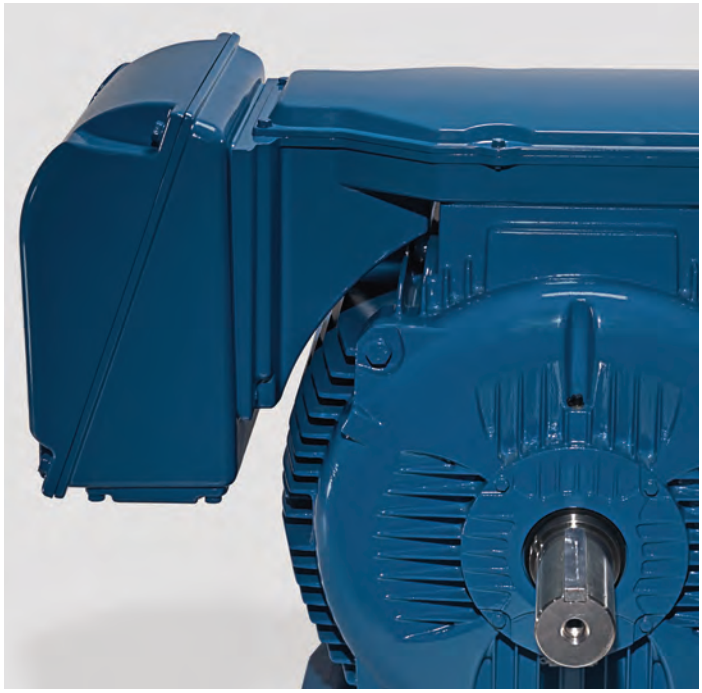
- Rugged
- Energy saving
- Increased productivity
- Extended lifetime
- Lower maintenance



USACRUSHER

Crusher Duty 3-Phase Motor
Efficiency and reliability for industry

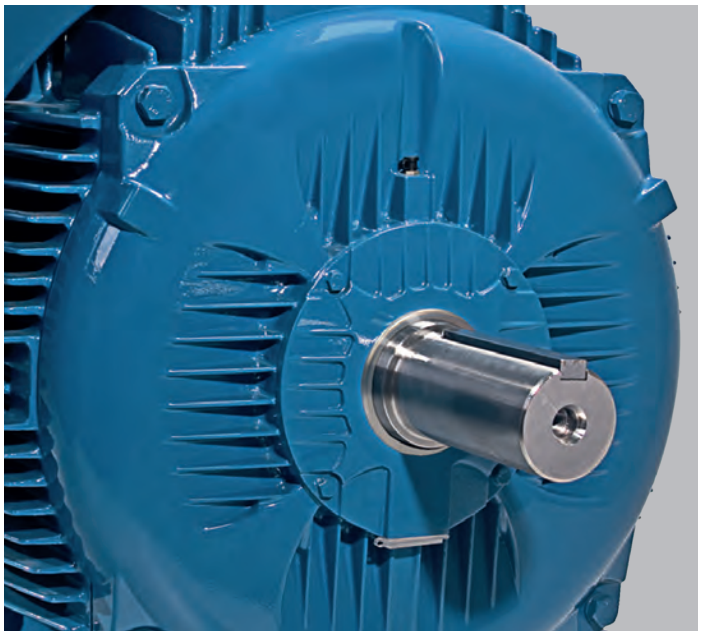
The WEG W22 Crusher Duty motor has been redesigned for even higher performance and energy efficiency, while still retaining all the great features of the previous W21 Crusher Duty motor. Designed to meet the demanding requirements of the rock crushing industry, the Crusher Duty motor comes standard with 4140 high strength shafts and heavy duty roller bearings. This motor complies or exceeds EISA 2007 regulation. Compliment your WEG Crusher Duty motor with our TPH2 Starter to complete your solution!



Terminal box

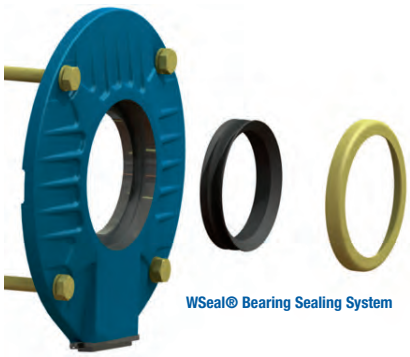
Increased internal space making connections more accessible to the user resulting in an easier cable handling and connection.

Terminal box can be mounted on top, left or right site of the motor using the same frame on the 447T and larger motors. Top mounting is optional on smaller frames.



Exclusive WSeal® bearing sealing system

Extends motor lifetime when operating in aggressive environments by protecting the motor against water and dust guaranteeing proper degree of protection. Frames 586/7 and larger utilize a brass labyrinth Taconite Seal.



WSeal® Bearing Sealing System

Taconite Labyrinth Seal

Lower total operational costs

A product that can operate most of its designed lifetime consuming the minimum possible energy, with high levels of reliability, generating the maximum value to the user – this is what is behind the W22 design.

Energy saving

Costs of energy correspond to approximately 90% of total operational costs throughout a motors lifetime. Acquisition, installation and maintenance cost are the other 10%. W22 Crusher Duty motors now have the highest efficiencies in the industry guaranteeing energy savings and reduced payback time.

Frame

Motor feet are solid providing a more resistant structure against vibration. The frame design has points that can be used as provisions for vibration sensors as a standard feature.

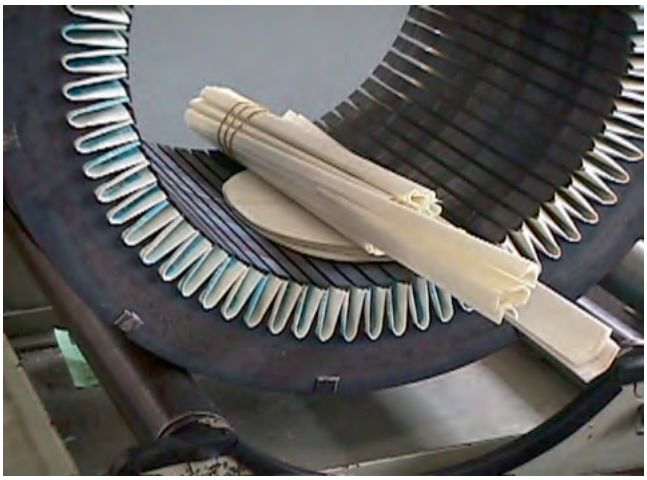
Benefits from the new frame design:

- Motor temperature reduction
- Eyebolts repositioned - easier handling in the application.
- Provision for vibration sensors - frame and endshields with provisions 90° displaced according to maintenance technical recommendations. Easier and more reliable vibration analysis.
- Solid feet - Enhanced reliability when operating on high vibration applications and also provide easier alignment on installation.

Built to last

W22 motors are built using high quality FC-200 cast iron from WEG's own foundries, assuring maximum durability and high performance in aggressive conditions. The new fan cover design provides great impact resistance. Additionally the endshields have been designed for a better bearing heat dissipation and structural rigidity. Protected by our WEG coatings high performance paint system capable of passing a 240hr ASTM 117B salt fog chamber test.

Stator core utilizing C4 coated Low loss Silicon Steel



Premium Electricial Steel for improved efficiency, reliability and repairability, C4 coated silicon steel can withstand burnout oven temperature of 500ºC (932F) minimum, to insure motors can be rebuilt to original performance.

Inverter Duty applications

The exclusive WISE insulation system used on the W22 increases winding dielectric resistance, thus allowing VFD operation up to 575V without requiring further modification, resulting in flexibility and extended motor lifetime. Utilizing class H magnet wire and varnish the system exceeds class F requirements.

** Voltages above 575 V, please contact our nearest sales office.*

Crusher Duty Motors - TEFC (IP55)
Three-Phase Motors

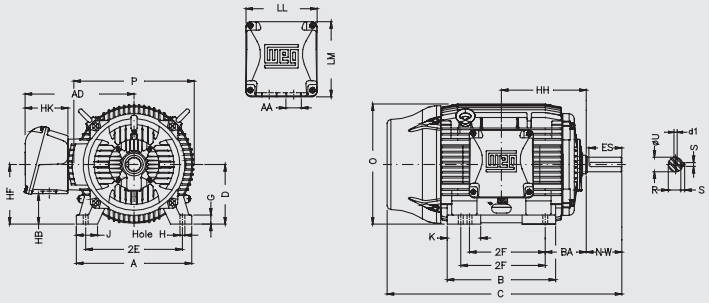
1.15SF, Class F insulation, F-1*, Roller Bearing
Full Voltage, Part Winding or Wye-Delta Starting

HP	RPM	NEMA Frame	Catalog Number	Approx. Shipp. Weight Lbs	FL Amps 460V	FL Eff. %	"C" Dimension (in.)	Voltage	Notes
50	900	404/5T	05009EP3EKD404T-W22	1108	61	91.7	39.730	230/460V	
60	900	404/5T	06009EP3EKD405T-W22	1163	74.2	91.7	39.730	230/460V	
75	900	444/5T	07509EP3GKD444T-W22	1602	92.8	93.0	44.950	460V	
100	1800	404/5T	10018ET3ERB405T-W22	1140	111	95.4	39.730	230/460V	
	1800	404/5T	10018ET3GRB405T-W22	1140	111	95.4	39.730	460V	
	1200	444/5T	10012ET3GRB444T-W22	1577	121	95.0	44.950	460V	
	900	444/5T	10009EP3GKD445T-W22	1757	127	93.0	44.950	460V	
125	1800	444/5T	12518ET3GRB444T-W22	1590	139	95.4	44.950	460V	
	1200	444/5T	12512ET3GRB445T-W22	1751	143	95.0	44.950	460V	
	900	445/7T	12509EP3GKD447T-W22	2315	151	93.6	48.700	460V	
150	1800	444/5T	15018ET3GRB445T-W22	1676	170	95.8	44.950	460V	
	1200	445/7T	15012ET3GRB447T-W22	2042	176	95.8	48.700	460V	
	900	445/7T	15009EP3GKD447T-W22	2138	184	93.6	48.700	460V	
200	1800	445/7T	20018ET3GRB447T-W22	1899	230	96.2	48.700	460V	
	1200	445/7T	20012ET3GRB447T-W22	2247	237	95.8	48.700	460V	
	1200	504/5Z	20012EP3GKD505Z-W22	2573	236	95.0	54.100	460V	1
	900	447/9T	20009EP3GKD449-W22	3598	262	94.5	56.340	460V	
	900	586/7T	20009EP3GKD586/7-W22	3659	249	94.5	61.900	460V	
250	1800	445/7T	25018EP3GKD447T-W22	2400	285	95.8	48.700	460V	
	1800	505Z	25018EP3GKD505Z-W22	2227	285	95.8	54.100	460V	1
	1200	447/9T	25012EP3GKD449-W22	3166	300	95.4	56.340	460V	
	1200	586/7Z	25012EP3GKD580Z-W22	3588	304	95.4	61.900	460V	1
	900	586/7T	25009EP3GKD586/7-W22	4051	308	95.4	61.900	460V	
300	1800	447/9T	30018EP3GKD449-W22	2996	335	95.8	56.340	460V	
	1800	586/7Z	30018EP3GKD580Z-W22	3300	335	95.8	61.900	460V	1
	1200	447/9T	30012EP3GKD449-W22	3386	362	95.4	56.340	460V	
	1200	586/7T	30012EP3GKD586/7-W22	3831	366	95.4	61.900	460V	
	1200	586/7Z	30012EP3GKD580Z-W22	3831	362	95.4	61.900	460V	1
	900	586/7T	30009EP3GKD586/7-W22	4221	366	95.4	61.900	460V	
350	1800	447/9T	35018EP3GKD449-W22	3364	396	95.8	56.340	460V	
	1800	586/7Z	35018EP3GKD580Z-W22	3688	401	95.8	61.900	460V	1
	1200	586/7Z	35012EP3GKD580Z-W22	4283	428	95.4	61.900	460V	1
	900	586/7T	35009EP3GKD586/7-W22	4634	429	95.0	61.900	460V	
400	1800	586/7Z	40018EP3GKD580Z-W22	4096	452	95.8	61.900	460V	1
	1200	586/7T	40012EP3GKD586/7-W22	4426	485	95.4	61.900	460V	
	1200	586/7Z	40012EP3GKD580Z-W22	4426	485	95.4	61.900	460V	1
450	1800	586/7T	45018EP3GKD586/7-W22	4316	497	95.8	61.900	460V	
	1800	586/7Z	45018EP3GKD580Z-W22	4316	497	95.8	61.900	460V	1
	1200	586/7Z	45012EP3GKD580Z-W22	4548	540	95.4	61.900	460V	1
500	1800	586/7Z	50018EP3GKD580Z-W22	4515	557	95.8	61.900	460V	1
	1200	586/7Z	50012EP3GKD580Z-W22	4548	598	95.8	61.900	460V	1

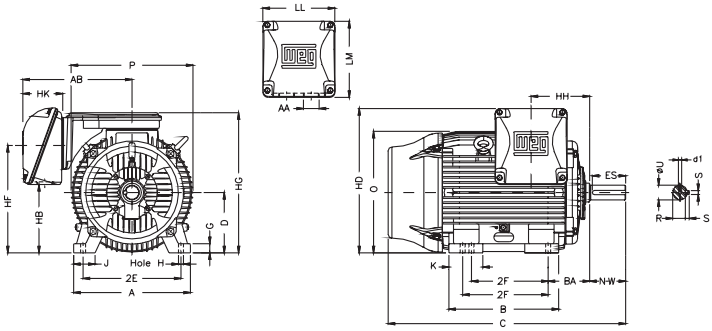
1 - Z Shaft is oversized shaft and bearings

15. Mechanical data

Frames 364 to 444/5T

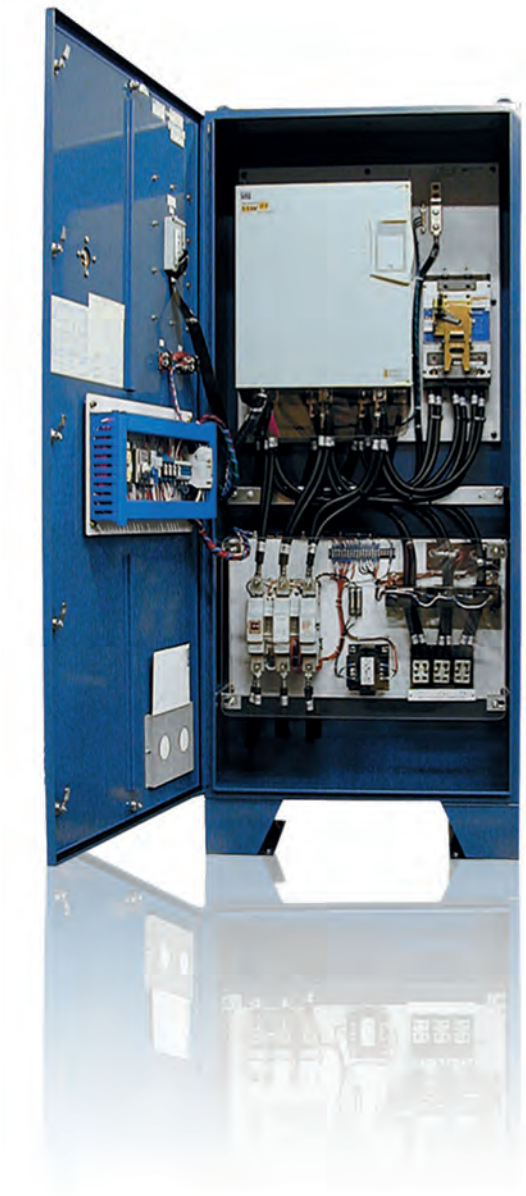


Frames 445/7T to 586/7T



Frame	Mounting				A	B	C	D	G	J	O	K	P	T	Keyway			Shaft Extension	
	2E	2F	H	BA											S	R	ES	N-W	U
-	14.016	11.260/12.244	0.660	5.875	17.165	16.220	-	9.000	1.480	3.150	17.957	4.921	17.914	-	-	-	-	-	-
364/5T							34.251								0.625	2.019	4.330	5.874	2.375
-	15.984	12.244/13.740		6.625	19.921	18.386	-	10.000	1.811		19.566	5.669	19.134		-	-	-	-	-
404/5T							39.730								0.750	2.449	5.512	7.250	2.875
-	18.000	14.500/16.500		7.500	21.929	20.315	-	11.000	1.630	3.937	22.795	5.866	23.583		-	-	-	-	-
444/5T							44.950								0.875	2.880	7.087	8.500	3.375
445/7TZ		16.500/20.000	0.810			23.897	51.826		1.654					4.620	1.000	3.312	8.661	11.625	3.875
445/7T							48.701								0.875	2.880	7.087	8.500	3.375
447/9TZ		20.000/25.000				31.535	59.463		1.630	4.331		6.692			1.000	3.312	8.661	11.625	3.875
447/9T							56.338								0.875	2.880	7.087	8.500	3.375
L447/9TZ		20.000/25.000					60.306			3.937	23.874	8.780	25.866		1.000	3.312	8.661	11.625	3.875
L447/9T							57.181								0.875	2.880	7.087	8.500	3.375
504/5TZ	20.000	16.000/18.000	1.250	8.500	24.724	24.449	55.09	12.500	2.146	4.724	25.425	7.228		4.880	1.000	3.312	8.661	11.625	3.875
504/5T							54.095								0.875	3.134	8.661	10.630	3.625
586/7TZ	23.000	22.000/25.000	1.181	10.000	29.528	29.921	61.902	14.500	2.492	5.512	28.985	9.055	28.977	5.590	1.000	3.312	8.661	11.625	4.375
586/7T							61.902								1.000	3.312	8.661	11.625	3.875

Frame	Terminal Box									d1	Bearings	
	AB	HB	HF	HG	HH	HK	LL	LM	AA		D.E.	N.D.E
-	16.378	4.055	-	-	12.362	6.378	9.646	10.119	NPT 3"	UNC 3/4"-10	NU314 C3	6314 C3
364/5T												
-		5.040			14.213						NU316 C3	
404/5T												
-	18.386	5.394			15.748	5.787	11.811	11.890	2xNPT 3"		-	
444/5T											NU319 C3	6316 C3
445/7TZ	20.670	12.598	20.724	26.850	11.803	6.968	14.646	15.040			NU322 C3	6314 C3
445/7T											NU319 C3	6316 C3
447/9TZ											NU322 C3	6314 C3
447/9T											NU322 C3	6319 C3
L447/9TZ	23.071	11.417	20.551	28.236	11.500	8.464	15.906	17.244			NU322 C3	6314 C3
L447/9T											NU322 C3	6319 C3
504/5TZ	20.670	15.275	24.291	29.409	10.394	6.968	14.646	15.040			NU322 C3	6314 C3
504/5T											NU319 C3	6316 C3
586/7TZ	23.977	17.322	26.182	33.346	13.386	8.464	15.906	17.244		UNC 7/8"-9	NU324 C3	6314 C3
586/7T											NU322 C3	6319 C3



Crusher Duty® Soft Starters
TPH Series

The WEG TPH Series of Crusher Duty® soft starters are designed to conquer the most demanding AC motor starting applications. While surpassing the highest starting torque requirements, the protective NEMA 4/12 enclosure makes the TPH Crusher Duty® soft starters ideal for the harsh industrial environments, even in wash down locations. Including as standard an AC3 full HP rated bypass contactor and motor overload relay,emergency direct-on-line starting is available at the flip of a switch while still providing full motor protection. Power lugs make motor connections safe and easy. The WEG TPH starters are built to complement the ruggedness and reliability of WEG motors, providing a complete and cost effective AC motor starting and protection solution.

Standard Features

- Rated 500% for Crusher Duty® applications.
- NEMA 4/12 WEG Blue enclosure. Suitable for dusty, wet or outdoor applications.
- Narrow design requires less space. Legs eliminate difficult wall mounting.
- Protective barriers over 460V and 120V terminals.
- Circuit breaker with door mounted operator provides built-in short circuit protection and power disconnect.
- Full HP rated bypass contactor (AC3) with thermal overload relay and emergency start switch inside the enclosure (Softstart-Off-Acrss the Line) can be used in the event of SSW failure.
- Full SSW protection during both start and bypass provides full protection from over/under current, supply and motor phase fault, phase unbalance, overtemp and over current.
- Keypad and full sized operator controls on cover with steel frame NEMA-4 window and cover over keypad. All parameter changes are through the cover-mounted keypad. Dust and water stay out of the enclosure. Monitoring of current, voltage, kVa and kW can be done from the outside.
- Terminations for remote start-stop furnished - no need to trace control circuit for additional power lines.
- 250VA 120V service receptacle - Power up meters, lights, and small tools without additional power lines.
- Modular multiple subpanel design. Ease of field modification or component replacement.

Crusher Duty®
Soft Starters

TPH2 - NEMA 4/12 Enclosure

Motor Volts	Motor HP	Starter AMPS	Catalog Number	Application Dimensions (in.) H x W x D	App. Shpg. Wt. (lbs.)
460V	INPUT POWER SUPPLY: THREE PHASE				
	100	130	TPH2100KD0000	54 x 36 x 18	442
	150	205	TPH2150KD0000	54 x 36 x 18	470
	200	255	TPH2200KD0000	66 x 36 x 18	608
	250	312	TPH2250KD0000	66 x 36 x 18	628
	300	365	TPH2300KD0000	78 x 36 x 18	770
	350	412	TPH2350KD0000	78 x 36 x 18	855
	400	480	TPH2400KD0000	78 x 36 x 18	855
	500	604	TPH2500KD0000	78 x 36 x 18	875

*** Includes 6" Legs*

Note: 1) For other technical data please refer to WEG product manual.
2) Contact WEG for 230V, 380V, 575V and any other non-standard voltage

USACD0808

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