

FACTORY MODIFICATION PRICING

Effective 03-24-17
Supersedes 06-14-15

MODIFICATION LEAD TIME

1. TWMC standard lead time for all modifications is 5-10 working days.
If shorter lead time is required, please contact TWMC. Expediting fees may apply.
2. Modification lead time does not include transit time.
3. Lead time is based upon availability of parts.
4. M2X, M8A, M8B, M10, M11, M14A, M16, M18, M21A is the only modification that can be done to our explosion-proof motors.
5. Explosion Proof motors modified in Round Rock, TX only.

MOD. NUMBER	DESCRIPTION	LIST PRICE (\$)										
		NEMA FRAME:	56-180T	210T	250T	280T	320T	360T	400T	440T	5000	5800 & UP
		METRIC FRAME:	90S, 90L, 112S, 112M	132S, 132M	160M, 160L	180M, 180L	200M, 200L	225S, 225M	250S, 250M	N/A	N/A	N/A
M1	Nameplate Change		105	105	105	105	105	105	105	105	105	105
M1A	Additional Nameplate		140	140	140	140	140	140	140	140	140	140
M1B	304 Stainless Steel Hardware		N/A	N/A	468	605	743	935	1,155	1,458	1,705	2,035
M2 ⁽¹⁾	Space Heater		407	407	491	535	604	604	673	826	1,678	1,906
M2A ⁽¹⁾	Space Heater w/ Auxiliary Box		881	881	998	1,076	1,152	1,228	1,304	1,458	2,118	2,351
M2X	Space Heater "Explosion Proof Motors Only"		614	614	767	922	1,076	1,076	1,228	1,535	N/A	N/A
M3C ⁽²⁾	Installation of C-Face		330	422	515	745	905	1,152	1,623	2,852	6,138	6,906
M3C841 ⁽²⁾	Installation of C-Face w/ INPRO™ Seal (MAX-E2/841® only)		674	960	1,382	1,535	1,918	2,148	2,610	3,159	N/A	N/A
M3D ^(2, 11, 12)	Installation of D-Flange		330	N/A	515	745	905	1,152	1,623	2,852	6,138	6,906
M3D841 ^(2, 11)	Installation of D-Flange w/ INPRO™ Seal (MAX-E2/841® only)		674	960	1,382	1,535	1,918	2,148	2,610	3,159	N/A	N/A
M3P ⁽²⁾	Installation of P-Base		N/A	N/A	592	645	811	1,030	1,449	1,993	N/A	N/A
M4 ⁽³⁾	Stator Winding RTD's, 100 Ohm Platinum (1/ Phase)		890	1,016	1,080	1,080	1,228	1,228	1,398	1,398	1,779	1,779
M4A ⁽³⁾	Stator Winding RTD's w/ Auxiliary Box (1/ Phase)		N/A	N/A	N/A	N/A	N/A	1,918	1,918	1,918	2,455	2,532
M4B ⁽³⁾	Stator Winding RTD's, 100 Ohm Platinum w/ Auxiliary Box (2/ Phase)		N/A	N/A	N/A	N/A	N/A	N/A	3,568	3,568	4,105	4,182
M5	Thermistors (1/ Phase)		614	922	922	922	1,228	1,228	1,228	1,228	1,535	1,535
M5A	Thermistors (1/ Phase) w/ Auxiliary Box		1,398	1,525	1,535	1,535	1,843	1,918	1,918	1,918	2,455	2,532
M6	Thermostats (1/ Phase)		307	460	460	460	614	648	737	737	767	767
M6A	Thermostats (1/ Phase) w/ Auxiliary Box		881	1,036	1,076	1,076	1,228	1,304	1,304	1,304	1,689	1,764
M7 ^(4, 6)	Bearing RTD's, 100 Ohm Platinum Cable Type with Aux Box (2/ motor)		N/A	N/A	N/A	N/A	N/A	N/A	3,304	3,304	3,304	3,304
M8 ⁽⁴⁾	Bearing Conversion - Roller to Ball or Ball to Roller		N/A	N/A	N/A	N/A	N/A	2,541	2,888	3,781	5,590	6,098
M8A ⁽⁴⁾	Convert to Ceramic or Hybrid Bearings		1,098	1,733	1,848	2,022	2,772	3,754	4,505	7,219	12,128	15,593
M8B ⁽⁴⁾	Convert to Outer Race Insulated Bearings		924	924	1,210	1,878	1,878	1,878	2,253	3,610	6,063	7,797
M9	Change Rotation		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,846	2,846
M10	Shorten Shaft to NEMA TS Dimensions ONLY; Does Not Require TWMC Drawing		N/A	N/A	N/A	1,382	1,535	1,689	1,843	2,148	QUOTE	QUOTE
M10A	Special Keyless 4140 Shaft Ext. for 440 Frames and Above; Any Special Shaft		N/A	N/A	N/A	N/A	N/A	N/A	N/A	QUOTE	QUOTE	QUOTE
M10B	Any Non NEMA Special Shaft Required; Non NEMA Dim requires TWMC Drawing		N/A	N/A	N/A	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE
M10C	Drill and Tap Shaft		425	425	580	750	925	925	1,100	1,100	QUOTE	QUOTE

Notes:

- (1) Double the List Price for 240V Space Heaters operated at 120V.
- (2) Price includes the flange.
- (3) Only one per phase is available for 360T frame and smaller.
- (4) Price is per bearing.
- (5) Not required for MAX-E2® or MAX-E2/841®.
- (6) For frames 140T-400T, please use Max-E2/841®.
- (7) M8A or M8B Mod required as well from frames 440TS/T and Larger.
- (8) Must Start with IEEE841 motor. Required only of motors with VBX Seal. Must perform M17 Mod, and add extra sealant to end brackets.
- (9) No Shaft Grounding Ring allowed in Div#2 Area.
- (10) Must start with "VPH" NEMA Premium Series.
- (11) Not available for Hybrid F# 449T/TS frames: EP3502, EP3504, HB3502, HB3504.
- (12) Excludes ASHA "P" and AMHGTK "PG" 2-Pole motors. Contact Application Specialist for quote.
- (13) If adding Stainless Steel Breather Drains for shaft up application see M28A.

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MODIFICATION LEAD TIME

Effective 03-24-17
Supersedes 06-14-15

1. TWMC standard lead time for all modifications is 5-10 working days.
If shorter lead time is required, please contact TWMC. Expediting fees may apply. Additional 15% of purchase order total is standard.
2. Modification lead time does not include transit time.
3. Lead time is based upon availability of parts.
4. M2X, M8A, M8B, M10, M11, M14A, M16, M18, M21A, M28 is the only modification that can be done to our explosion-proof motors.
5. Explosion Proof motors modified in Round Rock, TX only.

MOD. NUMBER	DESCRIPTION	LIST PRICE (\$)										
		NEMA FRAME:	56-180T	210T	250T	280T	320T	360T	400T	440T	5000	5800 & UP
		METRIC FRAME:	90S, 90L, 112S, 112M	132S, 132M	160M, 160L	180M, 180L	200M, 200L	225S, 225M	250S, 250M	N/A	N/A	N/A
M11	F1 to F2 Mounting Conversion	210	264	377	377	377	503	503	589	9,486	9,486	
M12	Supply Oversized Main Conduit Box	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4,620	4,620	4,620	
M12A	Supply Fully Loaded Main Conduit Box	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25,480	25,480	25,480	
M13 ⁽¹³⁾	Stainless Steel Breather Drains	210	264	377	377	377	503	503	589	589	670	
M14	Tropicalization/ Fungus Protection	284	284	284	284	284	284	284	468	857	857	
M14A	Tropicalization/ Fungus Protection for Explosion Proof Motors ONLY	341	341	341	341	341	341	341	562	1028	1028	
M15	Provisions for Vertical Jack Screws	N/A	N/A	N/A	N/A	N/A	N/A	1,185	1,185	Included	Included	
M16	Alternate Grease	314	364	364	427	508	589	670	751	1,185	1,185	
M17	Chico Motor Leads	210	264	377	377	377	503	549	549	900	1,142	
M18A ⁽⁵⁾	Epoxy Paint Finish	838	838	1,152	1,152	1,152	1,152	1,152	1,152	1,535	1,840	
M18B	Fire Pump Red	838	838	1,152	1,152	1,152	1,152	1,152	1,152	1,535	1,840	
M19 ⁽⁴⁾	Shaft INPRO™ Seals	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,003	3,003	3,003	
M20 ⁽⁵⁾	Grounding Provisions on Frame	140	140	140	140	140	140	140	Included	Included	Included	
M21	Drip Cover (TEFC) Rolled Steel	347	404	578	962	1,213	1,386	2,195	N/A	N/A	N/A	
M21A	Drip Cover (TEFC) Cast Iron	572	771	922	1,116	1,451	1,688	2,617	N/A	N/A	N/A	
M22	Extend Leads - Connection Behind Conduit Box; Price Based on 4' Leads	\$628 +\$1/ft	\$628 +\$1/ft	\$628 +\$1/ft	\$669 +\$3.25/ft	\$757 +\$6.50/ft	\$855 +\$12.70/ft	\$991 +\$19/ft	\$1049 +\$23/ft	\$1028 +\$25/ft	\$1427 +\$41/ft	
M23 ⁽⁹⁾	Supply Shaft Grounding Ring	650	742	742	1,242	1,242	1,334	1,489	1,587	1,587	2,285	
M23A ⁽⁹⁾	Supply Internal Shaft Grounding Ring	1300	1485	1485	2485	2485	2,650	2,950	3,175	QUOTE	QUOTE	
M23B ^{(9),(10)}	VHS Shaft Grounding Ring & Insulated Bearing for INV Duty	N/A	N/A	N/A	N/A	N/A	N/A	3,037	4,869	4,869	4,869	
M24 ⁽⁴⁾	Provisions for Vibration Sensor Spot Face, Drill & Tap (1/4-20)	N/A	N/A	N/A	N/A	N/A	N/A	384	384	384	384	
M24A ⁽⁴⁾	Provide and Install Vibration Switch/ Transmitter Spec. (Does Not Include Cabling or Terminations)	N/A	N/A	N/A	N/A	N/A	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	
M24B ⁽⁴⁾	Provide our Standard METRIX # ST5484E-121-714-00 Transmitter	N/A	N/A	N/A	N/A	N/A	3,250	3,354	3,587	4,154	5,600	
M25	Mill Off Motor Feet	1632	1676	1768	1856	2,038	2,310	2,764	3,216	3,750	QUOTE	
M26 ⁽⁷⁾	Inline Blower for 1000:1 Speed Range	508	681	951	1,109	1,756	1,860	2,044	6,999	12,249	17,499	
M27A ⁽⁷⁾	Installation of Dynopar Encoder	2,573	2,573	2,678	2,783	3,019	3,019	3,281	3,615	6,825	8,138	
M27B ⁽⁷⁾	Installation of Other Encoder	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	
M28	Vertical Shaft Down - Snap Ring (Lock Nut and Washer)	N/A	N/A	N/A	N/A	N/A	1,936	2,145	2,616	3,397	3,397	
M28A	Vertical Shaft Up - DE Lip Seal and Breather Drains in NDE Endframe	225	279	392	392	392	518	518	604	604	685	
M29 ⁽⁸⁾	Oil Mist Ready	N/A	N/A	N/A	N/A	N/A	N/A	2,625	3,413	6,563	9,188	
M30	Installation of Brake	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	
M31 ⁽⁶⁾	Convert to IP56 or IP65	489	682	795	795	935	1,092	1,219	1,219	QUOTE	QUOTE	
M32	Precision Balance	N/A	N/A	N/A	N/A	N/A	QUOTE	QUOTE	QUOTE	QUOTE	QUOTE	
M33	175% Thrust or more on VHS on 440 Frame 200-400 HP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	QUOTE	QUOTE	QUOTE	
M34	Convert TEFC to TEAO	650	750	850	900	1100	1300	1600	1900	QUOTE	QUOTE	

Notes:

- (1) Double the List Price for 240V Space Heaters operated at 120V.
- (2) Price includes the flange.
- (3) Only one per phase is available for 360T frame and smaller.
- (4) Price is per bearing.
- (5) Not required for MAX-E2® or MAX-E2/841®.
- (6) For frames 140T-400T, please use Max-E2/841®.
- (7) M8A or M8B Mod required as well from frames 440TS/T and Larger.
- (8) Must Start with IEEE841 motor. Required only of motors with VBX Seal. Must perform M17 Mod, and add extra sealant to end brackets.
- (9) No Shaft Grounding Ring allowed in Div#2 Area.
- (10) Must start with "VPH" NEMA Premium Series.
- (11) Not available for Hybrid F# 449T/TS frames: EP3502, EP3504, HB3502, HB3504.
- (12) Excludes ASHA "P" and AMHGTK "PG" motors. Contact Application Specialist for quote.
- (13) If adding Stainless Steel Breather Drains for shaft up application see M28A.

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M1. Nameplate Change:

Add new nameplate displaying approved data changes such as new voltage and frequency, revised HP and service factor, higher or lower ambient temperature, etc. Information should be clearly stamped on P.O.

M1A. Additional Nameplate:

Add second data plate with customer part number, order number, or other data.

M1B. 304 Stainless Steel Hardware:

Add for 304 Stainless Steel Hardware - Bolts, Nameplate.

M2. Space Heater:

Add wrap around space heaters with leads brought out to main terminal box. Standard voltage is 120V, however other voltages are available. Please specify voltage when ordering. All heaters are single phase.

M2A. Space Heater w/ Auxiliary Box:

Same as M2, except an auxiliary terminal box is added to the side of the main terminal box and the space heater leads are brought out to the auxiliary terminal box.

M2X. Space Heater "Explosion Proof":

Add wrap around space heaters with leads brought out to main terminal box. Standard voltage is 120V, however other voltages are available. Please specify voltages when ordering. All heaters are single phase. This applies to TWMC's explosion proof line of motors.

M3C. Installation of C-Face:

Remove drive-end bracket and replace with C-Face: Modification Price includes the C-Face.

M3C841. Installation of C-Face w/ INPRO™ Seal (MAX-E2/841® only):

Remove drive-end bracket and replace with C-Face and INPRO™ Seal: Only Available on MAX-E2/841® Line.

M3D. Installation of D-Flange:

Remove drive-end bracket and replace with D-Flange: Modification Price includes the D-Flange.

M3D841. Installation of D-Flange w/ INPRO™ Seal (MAX-E2/841® only):

Remove drive-end bracket and replace with D-Flange and INPRO™ Seal: Only Available on MAX-E2/841® Line

M3P. Installation of P Base on any Horizontal Motor for Vertical Mount.

Remove drive-end bracket

M4. Stator Winding RTD's, 100 Ohm Platinum (1/ phase):

Provide 100 Ohm platinum resistant temperature detectors (RTD's), one per phase, on the winding end turns with leads brought out to main terminal box. Note TWMC's medium voltage line of products come standard with 100 Ohm platinum RTD's, two per phase.

M4A. Stator Winding RTD's w/ Auxiliary Box (1/ Phase):

Provide 100 Ohm platinum resistant temperature detectors (RTD's) two per phase on the winding end turns with leads terminated in an auxiliary terminal box.

Note: On motors 449T frame and smaller, the auxiliary box will be located on the same side as the main lead box. On 5000 frames and larger, the auxiliary box will be located on the F2 side, or on the opposite side of the main lead box.

M4B. Stator Winding RTD's, 100 Ohm Platinum w/ Auxiliary Box (2/ Phase):

Provide 100 Ohm platinum resistant temperature detectors (RTD's) one per phase on the winding end turns with leads terminated in an auxiliary terminal box.

Note: On motors 360T - 449T, the auxiliary box will be located on the same side as the main lead box. On 5000 frames and larger, the auxiliary box will be located on the F2 side, or on the opposite side of the main lead box.

M5. Thermistors (1/ Phase):

Provide (3) PTC thermistors (140°C) on the winding end turns with leads brought out to main terminal box.
Note: these are standard on Metric motors with frames 160L and larger.

M5A. Thermistors (1/ Phase) w/ Auxiliary Box:

Provide (3) PTC thermistors (140°C) on the winding end turns with leads brought out to an auxiliary terminal box. The auxiliary box will be located on the side of the main terminal box.

M6. Thermostats (1/ Phase):

Addition of (3) normally closed thermostats (140°C) to the winding end turns, connected in series with the leads brought out to the main terminal box. This is standard on Explosion Proof Motors.

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M6A. Thermostats (1/ Phase) w/ Auxiliary Box:

Addition of (3) normally closed thermostats (140°C) to the winding end turns, connected in series with the leads brought out to an auxiliary terminal box. The auxiliary box will be located off the side of the main terminal box.

M7. Bearing RTD's, 100 Ohm Platinum (2/ motor) Cable Type with Aux. Box:

Add 100 Ohm platinum bearing resistance temperature detectors, on both the drive and non-drive end bearing. Specify if alternate type is required.

M8. Convert Bearings - Ball to Roller or Roller to Ball:

Convert from Roller Bearings to Ball Bearings or Ball Bearings to Roller Bearings. The Roller to Ball conversion requires some machining on bearing caps to allow for thermal growth.

M8A. Convert to Ceramic or Hybrid Bearings:

Replace existing bearing(s) with either Hybrid Ceramic bearings, where balls are Ceramic, or Solid Ceramic bearings. This would be to reduce/ eliminate shaft currents. TWMC's standard is on the Non-Drive End Bearing only.

M8B. Convert to Outer Race Insulated Bearings:

Replace existing bearing(s) with bearings that have outer race coated with insulated material like SKF "Insacote." This would be to reduce / eliminate shaft currents. TWMC's standard is on the Non-Drive End bearing only.

M9. Change Rotation:

This modification only applies to 2-Pole (3600/ 3000 RPM) motors in 5000 frames and larger. Standard direction of rotation is counter clockwise, facing the drive-end of the motor. This modification will change either the internal or external fans for operation in the clockwise direction, facing the drive-end.

M10. Shorten Shaft to NEMA TS Dimensions ONLY; Non-NEMA Dim Requires TWMC Drawing:

Machine shafts to TS Dimensions per NEMA MG1 ONLY. This does not include new bearings. This does NOT require a TWMC drawing.

M10A. Special Keyless 4140 Shaft Extension for 5000 Frames and above; Any Special Shaft:

Extension is for 5000 frames and above, where torsional stress in the application is high, such as reciprocating gas compressors. Requires TWMC approval, quote, and drawing.

M10B. Any NON NEMA Special Shaft Required:

This requires a TWMC quote and Drawing.

M10C. Drill and Tap Shaft:

M11. F1 to F2 Mounting Conversion:

Convert terminal box location from standard F1 to F2, or F2 to F1, depending on the product line. On medium voltage motors, the auxiliary terminal boxes will be on the opposite side of the main terminal box as standard. If the requirement is to have all terminal boxes on either the F1 side or the F2 side, please specify.

M12. Supply Oversized Main Conduit Box:

Replace existing conduit box with an oversized main conduit box. This would be done if the TWMC standard box does not meet customer's requirement. Mount and extend leads if necessary.

M12A. Supply Fully Loaded Main Lead Box:

Replace existing conduit box with a fully loaded box. The box will be TWMC standard size and will contain TWMC standard lightning arrestors, surge capacitors and current transformers (50:5). Box is not self supporting and will require the customer to support.

M13. Stainless Steel Breather Drains:

Drill and tap the existing drain holes to accommodate a Crouse-Hinds stainless steel breather drain. Note, this is standard on MAX-E2®, MAX-E2/841® and Explosion Proof motors.

M14. Tropicalization/ Fungus Protection:

Involves disassembling the motor and spraying the internal windings.

M14A. Tropicalization/ Fungus Protection for Explosion Proof Motors ONLY:

Involves disassembling the motor and spraying the internal windings.

M15. Provisions for Vertical Jack Screws:

Drill and tap (2) holes per motor.

M16. Alternate Grease:

Purge and repack lubricant in end brackets with TWMC standard high temp. or low temp. grease. Please contact TWMC for alternates.

M17. Chico Motor Leads:

Apply a compound between terminal box and frame of motor. This feature is standard for explosion proof motors.

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M18A. Epoxy Paint Finish:

Standard paint finish will be changed to Epoxy paint

M18B. Fire Pump Red Finish:

Standard paint finish will be changed to Fire Pump Red (e.g. PPG Pitt-Tech 90-306 Safety Red). Also requires addition of UL nameplate and Renameplate to show "FP" in catalog number.

M19. Shaft INPRO™ Seals:

Add INPRO™ seals to drive-end only of MAX-E2® motors 140T~449T/TS frames. This modification is only available for frames 440T and larger on all other product lines. The price reflects drive-end only.

M20. Grounding Provisions on Frame:

Drill and tap the motor frame. This is standard on MAX-E2®, MAX-E2/841®, Oil Well Pump motors, and motors on 5000 frames and larger. All motors have a grounding lug inside the main lead box as a standard.

M21. Drip Cover (TEFC) Rolled Steel:

Replace the existing fan cover with a rolled steel drip cover. This is only for motors mounted vertically.

M21A. Drip Cover (TEFC) Cast Iron:

Replace the existing fan cover with a cast iron drip cover. This is only for motors mounted vertically.

M22. Extend Leads - Connection Behind Conduit Box; Price Based on 4' leads:

Extend existing leads to the length specified by customer. The splice will be made behind the conduit box so it is not seen.

M23. Supply Shaft Grounding Ring:

Install AEGIS shaft grounding ring as made by ELECTRO STATIC TECHNOLOGY. This would be to reduce or eliminate shaft currents. Any CSA Hazardous Location nameplates must be removed. For other methods of shaft grounding, please contact TWMC.

M23A. Vertical Hollow Shaft Grounding Ring:

Install a Shaft Grounding Ring internally on inboard side of Guide Bearing Cap.

M23B. VHS Shaft Grounding Ring & Insulated Brg. For VFD Duty:

Must start with a VHP NEMA Premium motor. Install a SGR internally on guide bearing inboard cap, and insulated bearing.

M24. Provisions for Vibration Sensor:

Drill, tap and machine end bracket(s) to accommodate vibration sensor. Customer is required to submit specifications of vibration sensor. Price is per bracket.

M24A. Provide and Install Vibration Sensor (Does Not Include Cabling or Terminations):

Drill, tap and machine end bracket(s) to accommodate vibration sensor. TWMC standard switch will be provided as made by METRIX, ROBERTSHAW, PREDICTECH, or STI. For details or pricing to provide another brand, please contact TWMC. Price is per bracket.

M24B. Provide our Standard METRIX # ST5484E-121-714-00 Vibration Switch

M25. Mill Off Motor Feet:

TWMC will cut off the feet of a footed motor to create a round body type motor. Second lifting lug available for an additional price adder.

M26. Inline Blower for 1000:1 Speed Range:

Remove existing fan and fan cover and replace with TWMC standard inline blower/ fan cover configuration. Blower motor will require a separate power source. This modification will also require an "M8A" modification for 440TS/T frames and larger.

M27A. Installation of Dynapar Encoder:

Install TWMC standard Encoder as made by Dynapar.

M27B. Installation of Other Encoder:

Please contact factory for quote.

M28. Snap Ring - Lock Nut and Washer for Mounting the Motor Vertical Shaft Down

Available 320 frame and up.

M28A. Install Drive End Lip Seal and Stainless Steel Breather Drains for Motor Vertical Shaft Down

To prevent moisture from entering the motor in shaft up applications in an outdoor environment.

M29. Oil Mist Ready:

TWMC to prepare motors for immediate Oil Mist Lubrication. Must use MAX-E2/841® if applicable.

M30. Installation of Brake:

Modify TEFC motors such that a Brake can be attached. This must be quoted with specs and a TWMC Drawing required.

M31. Convert to IP56 or IP65:

TWMC to take IEEE 841 motor, perform M17 modification and add extra sealant to end-brackets.

M32. Precision Balancing for Vibration limits below what standard NEMA specification on IEEE/841 motors.

M33. 175% Thrust VHS on 440 Frame 200-400 HP:

Modify the motor adding correct bearings, parts, and oil for higher thrust

M34. Convert TEFC to TEAO

MODIFICATION DRAWING REQUIREMENTS

Effective 03-24-17
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DRAWING REQUIREMENTS

X No Drawing ● Basic Drawing ■ Modification Drawing

DRAWING REQ.	MOD CODE	MODIFICATION DESCRIPTION
X	M1	Nameplate Change
X	M1A	Additional Nameplate
X	M1B	304 Stainless Steel Hardware
●	M2	Space Heater
●	M2A	Space Heater with Aux Box
X	M2X	Space Heater "Explosion Proof Motors Only"
●	M3C	Installation of C-Face
X	M3C841	C-Face with Inpro (MAX-E2/841® only)
●	M3D	Installation of D-Flange
X	M3D841	D-Flange with Inpro (MAX-E2/841® only)
X	M3P	Installation of P-Base
X	M4	Winding RTD's 100 Ohm Platinum (1/Phase)
●	M4A	Winding RTD (2/Phase) with Auxillary Terminal Box
●	M4B	Stator Winding RTDs, 100 Ohm Platinum (2/phase)
X	M5	Thermistors (1/Phase)
●	M5A	Thermistors (1/Phase) with Auxilliary Box
X	M6	Thermostats (1/Phase)
●	M6A	Thermostats (1/Phase) with Auxilliary Box
●	M7	Bearing RTD
●	M8	Bearings Conversion: Ball to Roller/ Roller to Ball
●	M8A	Convert to Ceramic or Hybrid Bearings
●	M8B	Convert to Outer Race Insulated Bearings
X	M9	Change Rotation
●	M10	Shorten Shaft (TS Frames) Per NEMA MG-1 Dimensions (Non NEMA Dimensions Require TWMC Drawing and Approval)
■	M10A	Special Keyless 4140 Shaft Extension for 440 frames and Larger
●	M10B	Any Non NEMA Special Shaft Required; Non NEMA Dim Requires TWMC Drawing
●	M11	F1 to F2 Mounting Conversion
■	M12	Oversized Main Conduit Box - Mount and Extend Leads
■	M12A	Fully Loaded Main Conduit Box - Mount and Extend Leads
X	M13	Stainless Steel Breather Drains
X	M14	Tropicalization / Fungus Protection
●	M15	Provisions for Vertical Jack Screws
X	M16	Alternate Grease
X	M17	Chico Motor Leads
X	M18A	Epoxy Paint Finish
X	M18B	Fire Pump Red Finish
●	M19	Install INPRO Seals
X	M20	Grounding Provisions on Frame
●	M21	Drip cover (TEFC)- Rolled Steel
●	M21A	Drip cover (TEFC)- Cast Iron
X	M22	Extend Leads -Connect Behind Box; Price Based on 4' Leads
X	M23	Supply Shaft Grounding Ring
X	M23A	VHS Shaft Grounding Ring
X	M23B	VHS Shaft Grounding Ring & Insulated Brg for INV Duty
X	M24	Provision for Vibration Sensor
■	M24A	Provide and Install Vibration Switch/ Transmitter Spec. (Does not Include Cabling or Terminations)
■	M24B	Provide our Standard METRIX # ST5484E-121-714-00 Vibration Switch
■	M25	Mill Off Motor Feet
■	M26	Inline Blower for 1000:1 speed range
●	M27A	Installation Of Dynopar Encoder
●	M27B	Installation Of Other Encoder
X	M28	Lock Nut and Washer For Vertical Shaft Down
●	M29	Oil Mist Ready
■	M30	Installation of Brake
X	M31	Convert to IP56 or IP65
X	M32	Precision Balance
■	M33	175% Thrust or more on VHS on 440 Frame 200-400 HP
■	M34	Convert TEFC to TEAO