

C-FLANGE KITS FOR FIELD CONVERSION

Effective 07-08-18
Supersedes 03-24-17

FRAME	LIST PRICE (\$)	ODP ASHH CATALOG NO. "DHP"	MAX-PE™ AEHH8P CATALOG NO. "NP" (2)	MAX-E1® AEHE, AEHH8N CATALOG NO. "E" or "EP" (2)	MAX-E2® AEHH CATALOG NO. "HH"	MAX-E2/841® AEHH8B LIST PRICE (\$) (1)	MAX-E2/841® AEHH8B CATALOG NO. "HB" (2)
140T	125	N/A	CFN140T	CFE140T	CFHH140T	350	CFHB140T
180T	180	N/A	CFN180T	CFE180T	CFHH180T	465	CFHB180T
210T	325	N/A	CFN210T	CFE210T	CFHH210T	721	CFHB210T
250T	454	CFDH250T	CFN250T	CFE250T	CFHH250T	856	CFHB250T
280TS	529	CFDH280TS	CFN280TS	CFE280TS	CFHH280TS	1,075	CFHB280TS
280T	529	CFDH280T	CFN280T	CFE280T	CFHH280T	1,075	CFHB280T
320T or TS	689	CFDH320	CFN320	CFE320	CFHH320	1,175	CFHB320
360TS	825	CFDH360TS	CFN360TS	CFE360TS	CFHH360TS	1,289	CFHB360TS
360T	825	CFDH360T	CFN360T	CFE360T	CFHH360T	1,289	CFHB360T
400TS	1,025	CFDH400TS	CFN400TS	CFE400TS	CFHH400TS	1,575	CFHB400TS
400T	1,025	CFDH400T	CFN400T	CFE400T	CFHH400T	1,789	CFHB400T
444/445TS	2,150	CFDH444/5TS	CFN444/5TS	CFE444/5TS	CFHH444/5TS	3,400	CFHB444/5TS
444/445T	2,150	CFDH444/5T	CFN444/5T	CFE444/5T	CFHH444/5T	3,705	CFHB444/5T
447/449TS	2,550	CFDH447/9TS	CFN447/9TS	CFE447/9TS	CFHH447/9TS	3,810	CFHB447/9TS
447/449T	2,550	CFDH447/9T	CFN447/9T	CFE447/9T	CFHH447/9T	3,950	CFHB447/9T
Hybrid 449TS	2,650	N/A	N/A	CFE449TS-HYBRID	N/A	N/A	N/A
Hybrid 449T	2,650	N/A	N/A	CFE449T-HYBRID	N/A	N/A	N/A

NEMA C-FLANGE KITS FOR ROLLED STEEL MOTORS					
FRAME	LIST PRICE (\$)	ROLLED STEEL ASGA/ASGH ASGHPE CATALOG NO. "DS", "DSP" or "DTP"	SINGLE PHASE FARM DUTY CATALOG NO. "S"	3 PHASE ROLLED STEEL AEGHPE CATALOG NO. "GH"	3 PHASE ROLLED STEEL AEGH CATALOG NO. "GP"
56	103	CFDS56	CFS56	CFG56S3 CFG56L/140 ⁽⁴⁾	N/A
140T	103	CFDT140T	CFS140T	N/A	CFG56L/140
180T	103	CFDT180T	CFS180T	N/A	CFGP180
210T	189	CFDT210T	CFS210T	N/A	CFGP210
250T	189	CFDT250T	N/A	N/A	N/A
280TS	424	CFDT280TS	N/A	N/A	N/A
280T	424	CFDT280T	N/A	N/A	N/A

C-FACE KITS FOR LARGE TEFC FRAMES		
FRAME	LIST PRICE (\$)	MAX-E1® AEHE, AEHH8N, AEGHGTK CATALOG NO. "E", "EP", "KG"
5007A	3,600	3A103B8820103
5009A	3,600	3A103B8820201
5009B/C	3,600	3A103B5430207
5011A	3,850	3A103B8820308
5011B/C	3,850	3A103B5430304
5808A	4,300	3A103B9120202
5808B/C	4,300	3A103B6050203
5810A	5,350	3A103B9120300
5810B/C	5,350	3A103B6050301BG01

Notes:

- (1) For MAX-E2/841®, type AEHH8B (cat# "HB") motors, INPRO™ Bearing Isolator Seal is already included in the list price. INPRO™ Bearing Isolator Seal ships separately and will be added to order as an additional no cost line item.
- (2) "TS" Flanges are for 2 pole motors only. "TS" C-flanges for 280TS - 405TS are interchangeable between MAX-E1® and MAX®-SE/PE. 444TS - 449TS C-flanges are NOT interchangeable.
- (3) 56 Frame Only - Fits bearing sizes 6204ZZ
- (4) 56 and 140T Frames - Fits bearing sizes 6205ZZ
- (5) For frame sizes larger than 449T, please refer to an Application Specialist for availability.
- (6) MAX-E1® type AEHH8N "hybrid" ratings are cat# EP3502 & EP3504.
- (7) Flanges for F# 505UZ and 586/7UZ Crusher Duty "CD", type AEHHGD motors must be quoted by an Application Specialist.

IEC B14 "C-FLANGE" KITS		
FRAME	LIST PRICE (\$)	METRIC AESV3W CATALOG NO. "MP"
80	125	CFM80
90	135	CFM90
100	180	CFM100
112	195	CFM112
132	325	CFM132
160	454	CFM160

D-FLANGE KITS FOR FIELD CONVERSION

Effective 07-08-18
Supersedes 03-24-17

NEMA D-FLANGE KITS FOR CAST IRON MOTORS							
FRAME	LIST PRICE (\$)	ODP ASHH CATALOG NO. "DHP"	MAX-PE™ AEHH8P CATALOG NO. "NP"	MAX-E1® AEHE, AEHH8N CATALOG NO. "E" or "EP"	MAX-E2® AEHH CATALOG NO. "HH"	MAX-E2/841® AEHH8B LIST PRICE (\$)	MAX-E2/841® AEHH8B CATALOG NO. "HB"
140T	299	N/A	DFN140T	DFE140T	DFHH140T	333	DFHB140T
180T	319	N/A	DFN180T	DFE180T	DFHH180T	446	DFHB180T
210T	N/A	N/A	N/A	N/A	N/A	N/A	N/A
250T	385	DFDH250T	DFN250T	DFE250T	DFHH250T	688	DFHB250T
280TS	550	DFDH280TS	DFN280TS	DFE280TS	DFHH280TS	1,053	DFHB280TS
280T	570	DFDH280T	DFN280T	DFE280T	DFHH280T	1,053	DFHB280T
320T or TS	675	DFDH320	DFN320	DFE320	DFHH320	1,153	DFHB320
360TS	750	DFDH360TS	DFN360TS	DFE360TS	DFHH360TS	1,247	DFHB360TS
360T	750	DFDH360T	DFN360T	DFE360T	DFHH360T	1,247	DFHB360T
400TS	955	DFDH400TS	DFN400TS	DFE400TS	DFHH400TS	1,548	DFHB400TS
400T	955	DFDH400T	DFN400T	DFE400T	DFHH400T	1,758	DFHB400T
444/445TS	2,695	DFDH444/5TS	DFN444/5TS	DFE444/5TS	DFHH444/5TS	3,406	DFHB444/5TS
444/445T	2,695	DFDH444/5T	DFN444/5T	DFE444/5T	DFHH444/5T	3,718	DFHB444/5T
447/449TS	3,250	DFDH447/9TS	DFN447/9TS	DFE447/9TS ⁽⁶⁾	DFHH447/9TS ⁽⁶⁾	3,507	DFHB447/9TS ⁽⁶⁾
447/449T	3,250	DFDH447/9T	DFN447/9T	DFE447/9T ⁽⁶⁾	DFHH447/9T ⁽⁶⁾	3,819	DFHB447/9T ⁽⁶⁾

D-FLANGE KITS FOR LARGE TEFC FRAMES		
FRAME	LIST PRICE (\$)	MAX-E1® AEHE, AEHH8N, AEHGTK CATALOG NO. "E", "EP", "KG"
5007A	3,500	3A103B31010010N01
5009A	3,500	3A103B3101109
5009B/C	3,500	3A103B3100200
5011A	3,750	3A103B3101206
5011B/C	3,750	3A103B3100307
5808A	5,100	3A103B3110701
5808B/C	5,100	3A103B3110205
5810A	6,741	3A103B3110906
5810B/C	6,741	3A103B3110302

D-FLANGE KITS FOR LARGE ODP FRAMES		
5000A*	3,500	3A103B7680006BG0

IEC B5 "D-FLANGE" KITS			
FRAME	LIST PRICE (\$)	METRIC AESV3W CATALOG NO. "MP"	SPECIAL NOTE
80	299	DFM80	~
90	309	DFM90	~
100	319	DFM100	~
112	329	DFM112	~
132	350	DFM132	~
160	385	DFM160	~
180	550	DFM180	~
200	675	DFM200	~
225MA	750	DFM225-2P	2 Pole Only
225SC/225MC	750	DFM225-4/6P	4 & 6 Pole Only
250SA	955	DFM250-2P	2 Pole Only
250SC	955	DFM250-4/6P	4 & 6 Pole Only

Notes:

- * Part # for 2 Pole Only.
- (1) For MAX-E2/841®, type AEHH8B (cat# ""HB"") motors, INPRO™ Bearing Isolator Seal is already included in the list price. INPRO™ Bearing Isolator Seal ships separately and will be added to order as an additional no cost line item.
- (2) "TS" Flanges are for 2 pole motors only. "TS" c-flanges for 280TS-449TS are interchangeable between MAX-E1® and MAX®-SE/PE.
- (3) 56 Frame Only - Fits bearing sizes 6204ZZ
- (4) 56 and 140T Frames - Fits bearing sizes 6205ZZ
- (5) For frame sizes larger than 449T, please refer to the factory.
- (6) MAX-E1® type AEHH8N "hybrid" ratings are cat# EP3502 & EP3504. No D-flange is available at this time for Hybrid frames.
- (7) Flanges for F# 505UZ and 586/7UZ Crusher Duty "CD", type AEHHGD motors must be quoted by an Application Specialist.
- (8) Flanges for Large ODP motors above 5000 2P must be quoted by an Application Specialist.
- (9) TECO Westinghouse is working towards a solution for hybrid frame D-Flanges in the future.

DRIP COVERS, PAINT, & STOCK REPLACEMENT PARTS

Effective 07-08-18
Supersedes 03-24-17

DRIP COVER/FAN COVER ASSEMBLIES				
FRAME	ROLLED STEEL CATALOG NO.	ROLLED STEEL LIST PRICE (\$)	CAST IRON CATALOG NO.	CAST IRON LIST PRICE (\$)
140T	RSDC140T	102	CIDC140T	312
180T	RSDC180T	135	CIDC180T	400
210T	RSDC210T	193	CIDC210T	455
250T/TS	RSDC250T	355	CIDC250T	624
280T/TS	RSDC280TS	442	CIDC280T	931
320T/TS	RSDC320T	574	CIDC320T	1,235
360T/TS	RSDC360T	1,413	CIDC360T	1,965
400T/TS	RSDC400T	1,833	CIDC400T	2,045

Notes:

- (1) 56 frame drip covers available as stock items. Contact the parts department for part number and quote.
- (2) Drip covers available for 440T and above as made to order. Contact part department for quote.

AEROSOL TOUCH-UP SPRAY PAINT				
MOTOR TYPE	PAINT PART NUMBER	COLOR	PAINT #	LIST PRICE (\$)
MAX-E1® TEFC JP-JM LOW VOLTAGE ODP	5D98549H04	LIGHT GRAY	MUNSELL N5.0	77
MAX-E2® MAX-E2/841® METRIC IE3 MAX-VHP™ MAX-VSP™ SINGLE PHASE HVAC	5D98549H05	BLUE	MUNSELL 5PB 3/8	77
SINGLE PHASE FARM DUTY	5D98549H07	GREEN	MUNSELL 5G 4/4	77
TEXP TEFC OIL WELL PUMP	5D98549H08	DARK BLUE	MUNSELL 5PB 4.5/2	77
MAX-SE™ MAX-PE™ MAX-HT™ HIGH EFFICIENCY VERTICALS MEDIUM VOLTAGE	5D98549H03	DARK GRAY	MUNSELL 7.5B 3.5/0.5	77

Stock Replacement parts:

Contact TECO-Westinghouse for replacement part inquiries for stock product motors. Email our stock product parts group at Tframeparts@tecowestinghouse.com or call 1-800-USE-TECO and select or ask to be connected with the stock product parts group.

Most commonly replaced motor parts are stocked in limited quantities. Replacement parts are also available on a made to order basis.

To confirm the proper part is identified and quoted, the motor's catalog number AND serial number must be provided at time of inquiry. Not all currently stocked parts may be interchangeable for earlier models. Replacement parts for older models may no longer be available.

P-BASES HIGH THRUST TEFC VERTICAL MOTORS (HOLLOW SHAFT AND SOLID SHAFT)							
FRAME	TYPE	BD	AK	BB	AJ	BF	PART NUMBER
180	Standard	9.85"	8.25"	0.20"	9.125"	0.44"	31103F351X6C5
210	Standard	10"	8.25"	0.20"	9.125"	0.44"	31103F331X8C1
250	Standard	10"	8.25"	0.20"	9.125"	0.44"	31103F352X7C8
280	Standard	10"	8.25"	0.20"	9.125"	0.44"	31103F354X8C6
	Alternate	12"	8.25"	0.25"	9.125"	0.44"	31103F354X8C6
320	Standard	16.5"	13.5"	0.25"	14.750"	0.69"	31103B67604C0
360	Standard	16.5"	13.5"	0.25"	14.750"	0.69"	31103B67704C5
400	Standard	16.5"	13.5"	0.25"	14.750"	0.69"	31103B95105C1
400	Alternate	20.5"	13.5"	0.25"	14.750"	0.69"	Contact Factory

P-BASES HIGH THRUST TEFC VERTICAL MOTORS (HOLLOW SHAFT AND SOLID SHAFT)								
FRAME	TYPE	BD	AK	BE	BB	AJ	BF	PART NUMBER
444-445	Standard	16.5"	13.5"	1.00"	0.25"	14.75"	0.69"	3A103B329XSA8
445TP20/ 447/449	Standard	20"	13.5"	1.20"	0.25"	14.75"	0.69"	3A103B421XZA6
	Alternate	16.5"	13.5"	1.20"	0.25"	14.75"	0.69"	Contact Factory
	Alternate	24.5"	13.5"	1.20"	0.25"	14.75"	0.69"	Contact Factory
5000	Standard	24.5"	13.5"	1.18"	0.25"	14.75" 22"	0.69" 0.94"	3A103B155Y4A2
	Alternate	20.0"	13.5"	1.18"	0.25"	14.75" 22"	0.69" 0.94"	Contact Factory
	Alternate	30.5"	13.5"	1.18"	0.25"	14.75" 22"	0.69" 0.94"	Contact Factory
5800	Standard	30.5"	22"	1.38"	0.25"	26"	0.81"	3A103B41010A3
	Alternate	24.5"	22"	1.38"	0.25"	26"	0.81"	Contact Factory
	Alternate	36"	22"	1.38"	0.25"	26"	0.81"	Contact Factory

P-BASES HIGH THRUST WPI VERTICAL MOTORS (HOLLOW SHAFT AND SOLID SHAFT)								
FRAME	TYPE	BD	AK	BB	AJ	BF	PART NUMBER	NOTE
210	Standard	10"	8.25"	0.22"	9.125"	0.44"	31103F412X1C0	~
250	Standard	10"	8.25"	0.25"	9.125"	0.44"	31103F406X5C6	AMRCED ONLY
	Standard	10"	8.25"	0.25"	9.125"	0.44"	31103F406X6C3	AMRCNH ONLY
	Alternate	12"	8.25"	0.25"	9.125"	0.44"	31010D5150102	AMRCNH ONLY
	Alternate	16.5"	13.5"	0.25"	14.750"	0.44"	31103F406X200	~
280	Standard	10"	8.25"	0.25"	14.750"	0.44"	31103F407X3C7	~
	Alternate	12"	8.25"	0.25"	14.750"	0.44"	31010D5150307	~
	Alternate	16.5"	13.5"	0.25"	14.750"	0.44"	31103F407X205	~
320	Alternate	12"	8.25"	0.25"	9.125"	0.44"	31010D5150501	~
	Standard	16.5"	13.5"	0.28"	14.750"	0.69"	31103F408X2C5	~
360	Alternate	12"	8.25"	0.28"	9.125"	0.69"	31103F09X109	~
	Standard	16.5"	13.5"	0.28"	14.750"	0.69"	31103F409X3C8	~
400	Standard	16.5"	13.5"	0.28"	14.750"	0.69"	31103F410X4C1	~
	Alternate	20.5"	13.5"	0.28"	14.750"	0.69"	31103F410X104	~

Notes:

- (1) P-Bases require factory machine work prior to shipment/installation.
- (2) Consult a Stock Product Application Specialist or T-Frame parts for P-base price and availability.
- (3) P-Bases also available for MAX-PE, MAX-E1 and MAX-E2 for select ratings. Consult a Stock Product Application Specialist or T-frame parts for details.

P-BASES HIGH THRUST WPI VERTICAL MOTORS (HOLLOW SHAFT AND SOLID SHAFT)								
FRAME	TYPE	BD	AK	BE	BB	AJ	BF	PART NUMBER
444/445	Standard	16.5"	13.5"	1.00"	0.25"	14.75"	0.69"	3A103F072X5A5
445TP20	Standard	20"	13.5"	1.00"	0.25"	14.75"	0.69"	3A103B270X5A9
447/449	Standard	20"	13.5"	1.00"	0.25"	14.75"	0.69"	3A103F047X4A1
445TP20/447/449	Alternate	16.5"	13.5"	1.00"	0.25"	14.75"	0.69"	Contact Factory
5000	Alternate	20"	13.5"	1.18"	0.25"	14.75"	0.69"	3A103C077X5A8
	Standard	24.5"	13.5"	1.18"	0.25"	22"	0.94"	3A103C077X6A5
	Alternate	30.5"	22"	1.18"	0.25"	26"	0.81"	3A103C077X1A9
5800	Alternate	24.5"	13.5"	1.38"	0.25"	22"	0.94"	3A103C345X4A7
	Standard	30.5"	22"	1.38"	0.25"	26"	0.81"	3A103C345X3A0
	Alternate	36"	22"	1.38"	0.25"	26"	0.81"	Contact Factory

Notes:

- (1) P-Bases require factory machine work prior to shipment/installation.
- (2) Consult a Stock Product Application Specialist or T-Frame parts for P-Base price and availability.
- (3) P-Bases also available for MAX-PE, MAX-E1 and MAX-E2 for select ratings. Consult a Stock Product Application Specialist or T-frame parts for details.

P-BASE KITS FOR NO-THRUST TEFC FRAMES					
FRAME	LIST PRICE AEHH8P, AEHH8PCF, AEUH8PDC (\$)	MAX-PE AEHH8P CATALOG NO. "NP" or "NPV"	LIST PRICE AEHH8B, AEHH8BCF, AEUH8BDC (\$)	MAX-E2/841 [®] AEHH8B CATALOG NO. "HB" or "HBV"	BD
250T	425	PBN250T	850	PBHB250T	10"
280T	625	PBN280T	1150	PBHB280T/TS	16.5"
320T	750	PBN320T	1275	PBHB320T/TS	16.5"
360T	825	PBN360T	1375	PBHB360T	16.5"
400T	1050	PBN400T	1700	PBHB400T	16.5"
444/445T	2975	PBN444/5T	3745	PBHB444/445T	16.5"
447/449T	3575	PBN447/9T	N/A	N/A	20"

Notes:

- (1) For MAX-E2/841[®], type AEHH8B (cat# "HB") motors, INPRO™ Bearing Isolator Seal is already included in the list price. INPRO™ Bearing Isolator Seal ships separately and will be added to order as an additional no cost line item.

FACTORY MODIFICATION PRICING

Effective 07-08-18
Supersedes 03-24-17

MODIFICATION LEAD TIME

- (1) TWMC standard lead time for all modifications is 10-12 working days. If shorter lead time is required, please contact TWMC. Expediting fees will 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 are the only modifications 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	2,548	2,548	2,970	2,915	3,593	3,593	3,997	4,565
M2 ⁽¹⁾	Space Heater		464	466	644	644	669	793	921	1,004	1,678	1,906
M2A ⁽¹⁾	Space Heater w/ Auxiliary Box		881	881	1,136	1,136	1,152	1,228	1,535	1,615	2,118	2,351
M2X	Space Heater "Explosion Proof Motors Only"		721	721	863	1,085	1,234	1,260	1,370	2,281	N/A	N/A
M3C ⁽²⁾	Installation of C-Face		330	500	877	851	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	4,012	N/A	N/A
M3D ^(2, 11, 12)	Installation of D-Flange		406	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	N/A	1,382	1,535	1,918	2,148	2,610	4,122	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	1,386	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	4,489	4,633	4,926
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)		559	724	724	724	852	852	889	889	962	962
M6A	Thermostats (1/ Phase) w/ Auxiliary Box		1,035	1,145	1,272	1,272	1,382	1,455	1,705	1,705	2,053	2,108
M7	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	5,507	5,507	5,507	5,507
M8	Bearing Conversion - Roller to Ball or Ball to Roller (2/ Motor)		N/A	N/A	N/A	N/A	N/A	3,630	4,813	5,357	9,416	9,847
M8A ⁽⁴⁾	Convert to Ceramic or Hybrid Bearings		1,098	2,044	2,493	2,930	3,187	3,754	5,472	7,219	12,128	15,593
M8B ⁽⁴⁾	Convert to Outer Race Insulated Bearings		924	1,039	1,815	1,878	1,878	2,459	3,646	4,295	6,063	7,797

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) N/A
- (7) M8A or M8B Mod required as well from frames 440TS/T and Larger.
- (8) Must Start with IEEE841 motor. 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 AMHGK "PG" 2-Pole motors. Contact Application Specialist for quote.
- (13) If adding Stainless Steel Breather Drains for shaft up application see M28A.
- (14) Terminal Block Not Available for 56 Frame Motors.

FACTORY MODIFICATION PRICING

Effective 07-08-18
Supersedes 03-24-17

MODIFICATION LEAD TIME

- (1) TWMC standard lead time for all modifications is 10-12 working days. If shorter lead time is required, please contact TWMC. Expediting fees will 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 are the only modifications 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	
M9	Change Rotation		N/A	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		2,270	2,403	2,740	3,010	3,350	3,483	3,960	4,433	4,917	4,917	4,917
M10A	Special Keyless 4140 Shaft Ext. for 440T Frames and Above; Any Special Shaft		N/A	N/A	N/A	N/A	N/A	N/A	N/A	QUOTE	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	QUOTE
M10C	Drill and Tap Shaft		477	550	660	750	925	925	1,100	1,320	QUOTE	QUOTE	QUOTE
M11	F1 to F2 Mounting Conversion		210	264	377	377	377	503	587	733	9,486	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	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	25,480
M13 ⁽¹³⁾	Stainless Steel Breather Drains		210	264	377	377	377	503	503	589	589	670	670
M14	Tropicalization/ Fungus Protection		435	545	545	655	765	1,021	1,498	1,755	2,525	2,525	2,525
M14A	Tropicalization/ Fungus Protection for Explosion Proof Motors ONLY		341	341	341	341	341	341	341	562	1,028	1,028	1,028
M15	Provisions for Vertical Jack Screws		N/A	N/A	N/A	N/A	N/A	N/A	1,185	1,185	Included	Included	Included
M16	Alternate Grease		330	364	364	440	508	589	670	751	1,185	1,185	1,185
M17	Chico Motor Leads		210	264	377	377	377	503	633	633	1,243	1,563	1,563
M18A ⁽⁵⁾	Epoxy Paint Finish		838	838	1,152	1,152	1,152	1,152	1,152	1,152	1,535	2,805	2,805
M18B	Fire Pump Red		838	838	1,152	1,152	1,152	1,152	1,152	1,152	1,535	2,805	2,805
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	3,003
M20 ⁽⁵⁾	Grounding Provisions on Frame		140	140	140	140	140	140	140	Included	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	N/A
M21A	Drip Cover (TEFC) Cast Iron		572	771	922	1,116	1,451	1,861	2,617	N/A	N/A	N/A	N/A
M22	Extend Leads - Connection Behind Conduit Box; Price Based on 4' Leads		733 +\$1/ft	770 +\$1/ft	788 +\$1/ft	953 +\$3.25/ft	990 +\$6.50/ft	1,078 +\$12.70/ft	1,503 +\$19/ft	1,595 +\$23/ft	2,145 +\$25/ft	2,237 +\$41/ft	2,237 +\$41/ft

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) N/A
- (7) M8A or M8B Mod required as well from frames 440TS/T and Larger.
- (8) Must Start with IEEE841 motor. 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 AMHGK "PG" motors. Contact Application Specialist for quote.
- (13) If adding Stainless Steel Breather Drains for shaft up application see M28A.
- (14) Terminal Block Not Available for 56 Frame Motors.

FACTORY MODIFICATION PRICING

Effective 07-08-18
Supersedes 03-24-17

MODIFICATION LEAD TIME

- (1) TWMC standard lead time for all modifications is 10-12 working days. If shorter lead time is required, please contact TWMC. Expediting fees will 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 are the only modifications 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
M23 ⁽⁹⁾	Supply Shaft Grounding Ring		803	913	965	1,242	1,242	1,334	1,489	2,017	2,567	3,135
M23A ⁽⁹⁾	Supply Internal Shaft Grounding Ring		1,300	1,485	1,485	2,485	2,485	2,650	2,950	3,175	QUOTE	QUOTE
M23B ^(9,10)	VHS or VSS Shaft Grounding Ring & Insulated Bearing for VFD Duty		N/A	N/A	N/A	N/A	N/A	N/A	3,037	4,869	4,869	6,288
M23H ⁽⁹⁾	Supply Shaft Grounding Device		803	913	965	1,242	1,242	1,334	1,489	2,017	2,567	3,135
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	1,283	1,283	1,283	1,283
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		1,632	1,676	1,768	1,856	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
M26A	Provide Centrifugal (Scorpion Tail) Blower, motor, filter, and fab fan cover for 440 and above frames		N/A	N/A	N/A	N/A	N/A	N/A	N/A	9,955	15,450	19,495
M27A ⁽⁷⁾	Installation of Dynapar Encoder		2,573	2,573	2,678	2,783	3,019	3,019	3,615	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	3,250	3,354	3,587	4,154	5,600
M28A	Vertical Shaft Up - DE Lip Seal and Breather Drains in NDE Endframe		225	279	392	392	392	518	518	604	604	685
M29 ⁽⁶⁾	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 ⁽⁸⁾	Convert to IP65 or IP66		489	682	795	795	935	1,092	1,219	1,462	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 TEO		650	750	850	900	1,100	1,300	1,600	1,900	QUOTE	QUOTE
M35 ⁽¹⁴⁾	Terminal Block in Main Lead Box		458	654	654	654	890	890	905	995	N/A	N/A

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) N/A
- (7) M8A or M8B Mod required as well from frames 440TS/T and Larger.
- (8) Must start with IEEE 841 motor. Must perform M17 Mod for IP65. Must perform M17 Mod, plus add extra sealant to end brackets, for IP66.
- (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 AMHGK "PG" motors. Contact Application Specialist for quote.
- (13) If adding Stainless Steel Breather Drains for shaft up application see M28A.
- (14) Terminal Block Not Available for 56 Frame Motors.

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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 and install P-base.

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.

FACTORY MODIFICATION DESCRIPTIONS

Effective 07-08-18
Supersedes 03-24-17

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.

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 Cable Type with Aux. Box (2/ Motor):

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 (2/ Motor):

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 Hybrid Bearings:

Convert to Ceramic Hybrid Bearings: Replace existing bearing(s) with Hybrid Ceramic bearings, where the balls are ceramic. This would 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.

FACTORY MODIFICATION DESCRIPTIONS

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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.

M18A. Epoxy Paint Finish:

Standard paint finish will be changed to Epoxy paint (e.g. MAX-E2® Epoxy Paint (Blue)).

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. Any CSA Hazardous Location nameplates must be removed. This would be to reduce or eliminate shaft currents. 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 or VSS Shaft Grounding Ring & Insulated Bearing for VFD Duty:

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

M23H. Supply Shaft Grounding Device:

Install shaft grounding device to reduce or eliminate shaft currents. CSA Hazardous Location Nameplates must be removed.

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.

FACTORY MODIFICATION DESCRIPTIONS

Effective 07-08-18
Supersedes 03-24-17

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.

M26A. Installation of Centrifugal Blower:

Provide Centrifugal Blower, motor, filter, and fab fan cover for 440 and above frames.

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 on 320 frames and up.

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

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 IP65 or IP66:

TWMC to take IEEE 841 motor and perform M17 Mod for IP65. Must perform M17 Mod, plus add extra sealant to end brackets, for conversion to IP66.

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**M35. Terminal Block in Main Lead Box:**

Add a 6 lug terminal block into the Cast Iron or Rolled Steel Main Lead Box for motor frame sizes 143T through 449T and attach the motor leads to the terminal block.

MODIFICATION DRAWING REQUIREMENTS

Effective 07-08-18
Supersedes 03-24-17

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
●	M2X	Space Heater "Explosion Proof Motors Only"
■	M3C	Installation of C-Face
■	M3C841	C-Face with Inpro (MAX-E2/841® only)
■	M3D	Installation of D-Flange
■	M3D841	D-Flange with Inpro (MAX-E2/841® only)
■	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 (2/ Motor)
●	M8	Bearings Coversion: Ball to Roller/ Roller to Ball (2/ Motor)
●	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
■	M10C	Drill and Tap Motor Feet
X	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
■	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 or VSS Shaft Grounding Ring & Insulated Brg for INV Duty
■	M23H	Supply Shaft Grounding Device
■	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
■	M26A	Install Centrifugal Blower
■	M27A	Installation Of Dynopar Encoder
■	M27B	Installation Of Other Encoder
X	M28	Lock Nut and Washer For Vertical Shaft Down
■	M28A	Vertical Shaft up DE lip seal and breather drains in NDE endframe
■	M29	Oil Mist Ready
■	M30	Installation of Brake
X	M31	Convert to IP65 or IP66
X	M32	Precision Balance
■	M33	175% Thrust or more on VHS on 440 Frame 200-400 HP
■	M34	Convert TEFC to TEAO
X	M35	Terminal Block in Main Lead Box