

Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION for INDUCTION MOTOR



0		For Bidding			
No.	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HHI150-18-445TC	Item No.			Rev. No.	[]	
Project Name		Project No.			Quantity	sets	
GENERAL SPECIFICATION				PERFORMANCE DATA			
Frame Size	445TC		Rated Output	110 kW		150 HP	
Type	PJP		Number of Poles	4			
Enclosure(Protection)	Totally Enclosed / IP55		Rotor Type	Squirrel Cage			
Method of Cooling	IC411(FC)		Starting Method*	D.O.L			
Rated Frequency	60 Hz		Rated Voltage	575 V	460 V	230 V	
Number of Phases	3		Current	Full Load	131.0 A	163.8 A	327.5 A
Insulation Class	F			Locked-rotor**	700 %	700 %	700 %
Temp. Rise at full load (by resistance method)			Efficiency				
	at 1.0 S.F	80 deg. C	50% Load 92.8 %				
Motor Location	☐ Indoor ☐ Outdoor		75% Load 94.8 %				
Altitude	Less than 1,000 meter		100% Load 95.8 %				
Relative Humidity	Less than 80 %		Power Factor(p.u)				
Ambient Temp.	40 deg. C (Max.)		50% Load 0.730				
Duty Type	Continuous (S1)		75% Load 0.830				
Service Factor	1.15		100% Load 0.880				
Mounting	B35		Speed at Full Load		1785 r.p.m		
Bearing	Type	Anti-Friction	Torque				
	DE/N-DE	6318C3 / 6316C3	Full Load 434.14 lb.ft				
	Lubricant	Grease(Polyrex-EM)	Locked-rotor** 140 %				
External Thrust	Not applicable		Breakdown** 220 %				
Coupling Method	☒ Direct ☐ V-belt		Moment of Inertia (J)				
Shaft Extension	Single		Load(Max.) 1,855.724 lb.ft2				
Terminal	Main	Cast Iron	Motor 67.430 lb.ft2				
Box	Aux.	No	Sound Pressure Level (No-load & mean value at 1m from motor)				
	Location	Refer to Outline Drawing	85 dB(A)				
Application			Vibration 3.8 mm/sec (peak)				
Area classification	Hazardous		Permissible number of Cold 3 times				
Type of Ex-Protection	Class I&II, Division 2		consecutive starts Hot 2 times				
Applicable Standard	NEMA MG1, CSA C390		Paint	Munsell No.	4.0PB5.4/5.5(VL-451)		
ACCESSORIES			SUBMITTAL DRAWING				
			Outline Dimension Drawing \ Motor Weight(Approx.)				
			B35		LM-T1445C4PL001	1720 lb.	
SPARE PARTS			REMARK				
			1. Premium efficiency according to NEMA MG1 2. Inverter Duty @ 1.0 Service Factor & F Temperature rise -. 10:1 VT (20:1 VT at 50% load) -. 10:1 CT (1 hour duty, 4:1 continuous) -. CHP up to 1.5 times base speed, NEMA MG1 Part31 3. CSA Certification -. Class I, Division 2, Group A, B, C & D -. Class II, Division 2 Group E, F & G (Group E : up to 320Fr.) 4. Service Factor 1.15 and Temperature rise B are applicable under the condition of sine wave power. 5. Service Factor 1.25 is applicable to motors of 100HP or less with temperature rise F & Non-Hazardous. 6. Temp. code : T3A(180°C) at sine wave				
			Date	DSND	CHKD	CHKD	APPD
			2025-07-22	S.H. LEE	I.K. KIM	R.G. KIM	S.W. KIM

[Note] Others not mentioned in this data sheet shall be in accordance with maker standard.

Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.

Inspection and performance test shall be done according to maker standard, if not mentioned.

* In case of Inverter-Fed Motor, performance data is based on sine wave tests. It may be different from test data of Inverter combined motor.

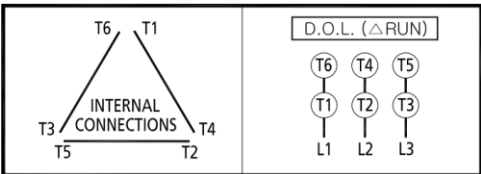
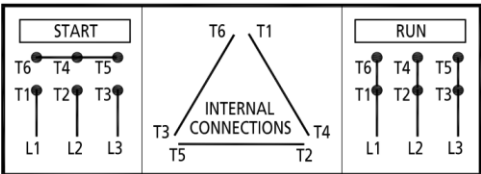
** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

MAIN NAMEPLATE

4.72

150HP		4P	460V	Cat. No.	HHI150-18-445TC				
Model	HLS445PR0408			INS. Class	F	HD-F1	Amps	163.8A	
Type	HLS	Duty	CONT	Code	G	Amb.	40°C	Hertz	60Hz
Frame	445TC	Encl.	TEFC	S.F.	1.15	RPM	1785	NEMA Nom. Eff.	95.8%
Bearing	Drive	6318C3			S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			3/4 Eff.	94.8%
	Opp.	6316C3						NEMA Design	B
Usable at	50Hz 150HP 380V 197.9A 1480rpm S.F.: 1.0 Eff.: 95.2% Code: E								
	50Hz 150HP 400/415V 189.1/184.4A 1482/1484rpm S.F.: 1.0 Eff.: 95.5/95.6% Code: F/G								
CSA Certified for	Model	LATER	Type	PJP	Temp. Code	Frame	140~320FR	360~400FR	440FR
	CLASS I, Div. 2, Gr. A, B, C & D	CLASS II, Div. 2 Gr. E, F & G (Gr. E: Up to 320FR)			Amb. 40°C	T3C (160°C)	T3B (165°C)	T3A (180°C)	
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC				Amb. 55°C	T3A (180°C)	T3A (180°C)	T3 (200°C)	
No.	-	Date	-	Weight			1720 lb		
4M-135702				Made in Korea H1				HD HYUNDAI ELECTRIC	
MARINE DUTY IEEE45									

WIRING DIAGRAM

D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)
WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES.  KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-129326	WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES.  KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-128852

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HHI, 364-449)	DWG SIZE	A4 (1:1)
CHKD BY	I.K.KIM	SCALE	NONE	NAMEPLATE DRAWING			
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle				
DSND BY	S.H.LEE	DATE	2024.06.07				
HD HYUNDAI ELECTRIC				REF. NO	4M-135702 / 4M-129326	Sheet No.	of
				DWG NO	NP-HHI150-18-445TC	Revision No.	0

Type : PJP

110kW 150HP 4 P 60 Hz

Full Load Torque : 434.14 lb.ft

Speed at Full Load : 1785 RPM

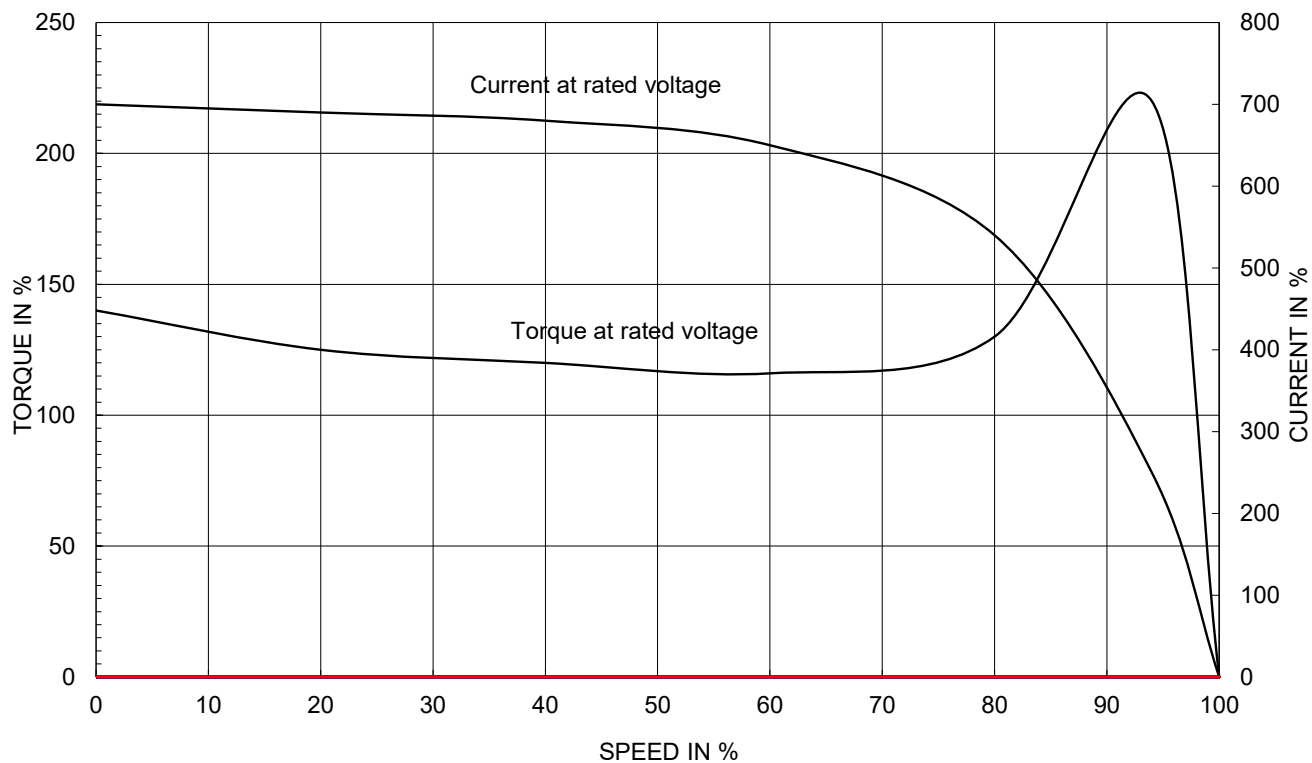
Load moment of Inertia (J) : 1855.724 lb.ft2

Rated Voltage	575V	460V	230V
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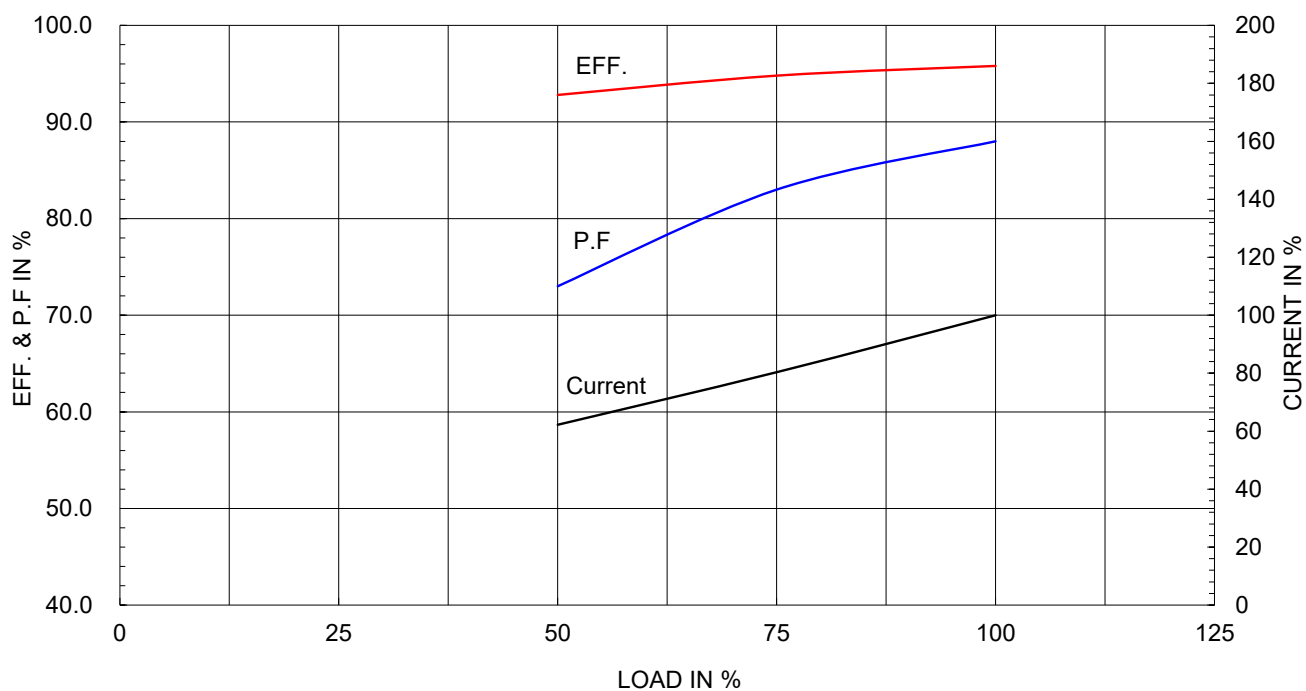
Motor moment of Inertia (J) : 67.430 lb.ft2

Full Load Current	131.0A	163.8A	327.5A
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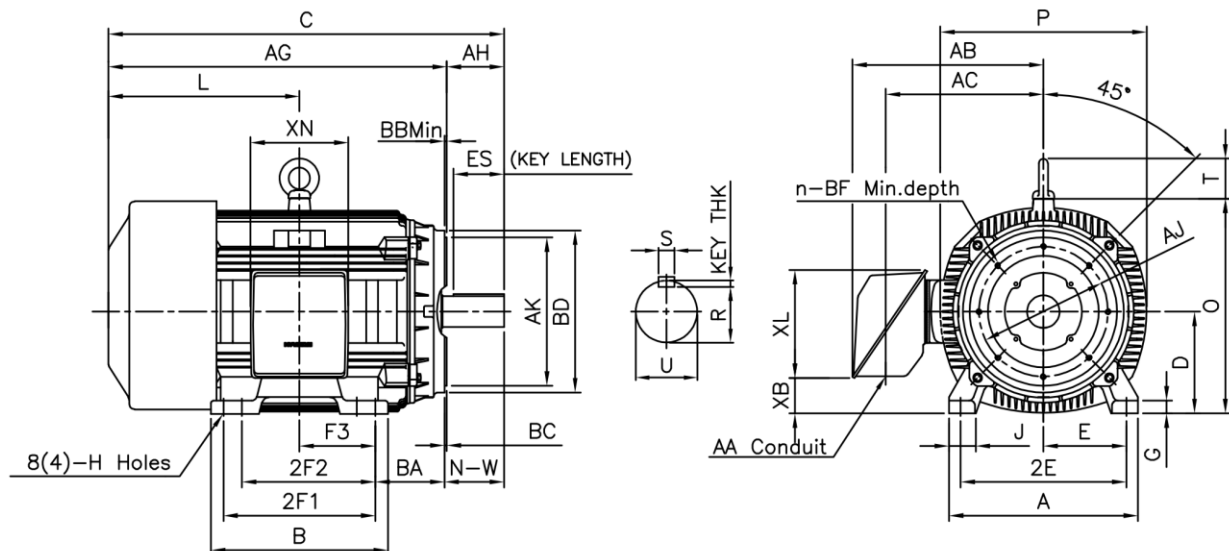
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



1	2	3	4
▽	50S	REV	DATE
▽▽	12.5S		
▽▽▽	3.2S		
▽▽▽▽	0.4S		



DIMENSIONS

Unit:inch

M O U N T I N G									C O N D U I T B O X						APPROX. WGT.(LB)
A	B	2E	2F1	2F2	F3	G	J	H	AA	AB	AC	XB	XL	XN	
20.51	19.21	18.00	16.50	(14.50)	8.248	1.42	3.07	0.81	3.00	21.26	18.03	3.83	11.65	10.63	1720

O V E R A L L								S H A F T					KEY	BEARING	
BA	C	D	L	O	P	T	AG	U	N-W	KEYWAY			THK.	DRIVE END	OPP. DRIVE END
										R	ES	S			
7.50	45.21	11.00	20.96	23.19	22.44	4.33	36.71	3.375	8.50	2.880	6.93	0.875	0.875	6318C3	6316C3

C - F A C E								
AJ	AK	BB Min	BC	BD	BF	BF depth	n	AH
14.00	16.00	0.25	0.25	17.48	5/8-11	0.94	8	8.25

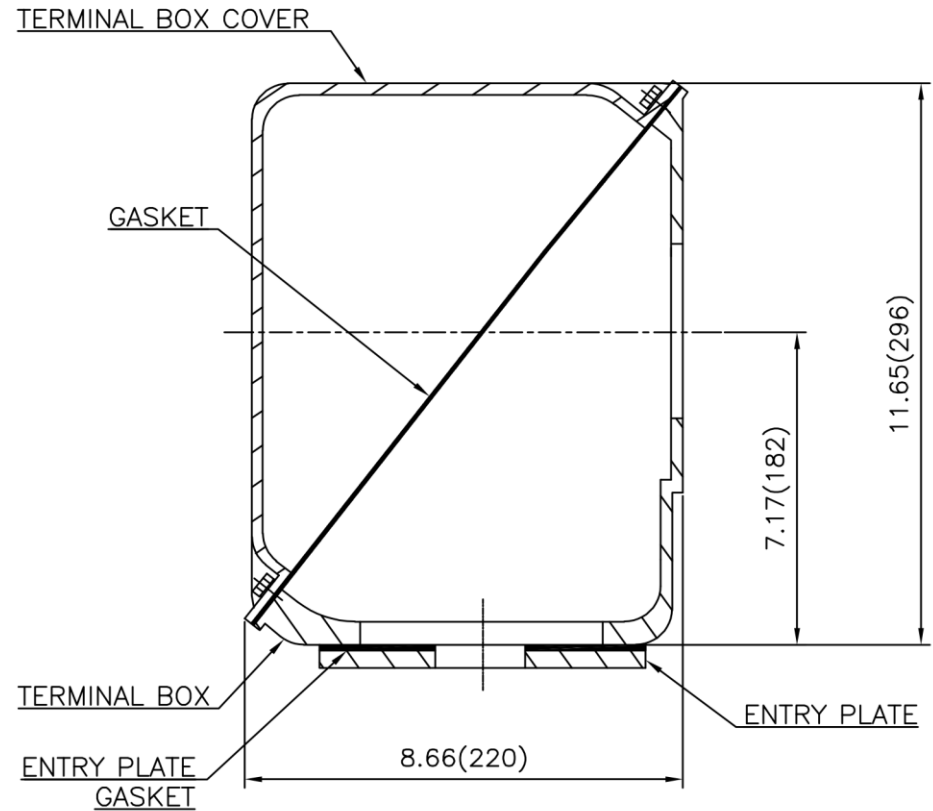
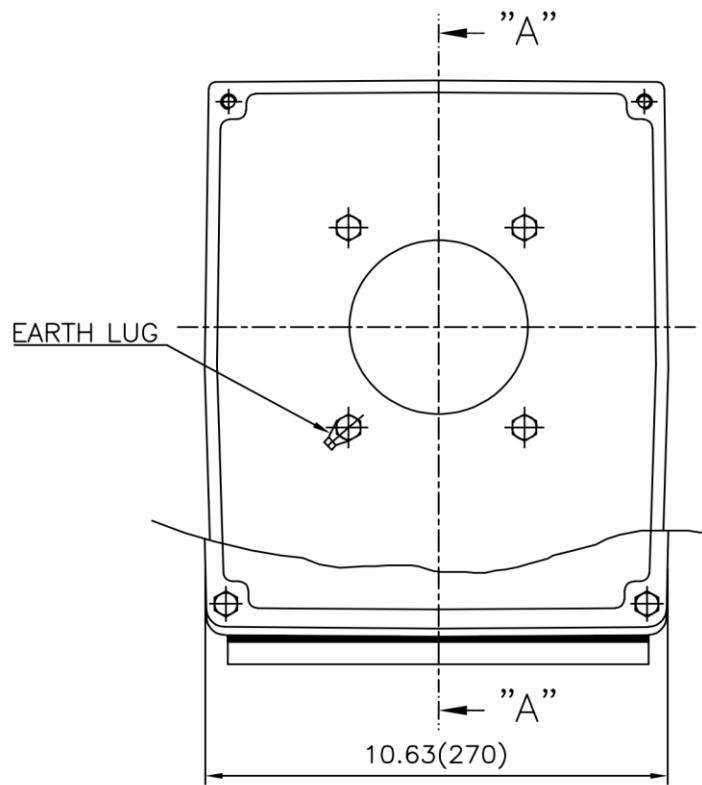
NOTE

- 1.Dimension "D" tolerance : +0.00inch ~ -0.03inch (143TC-365TC) : +0.000inch ~ -0.06inch (404TC-449TC)
- 2.Dimension "U" tolerance : +0.000inch ~ -0.0005inch (143TC-215TC): +0.000inch ~ -0.001inch (254TC-449TC)
- 3.Dimension "R" tolerance : +0.000inch ~ - 0.015inch
- 4.Dimension "AK" tolerance : +0.000inch ~ -0.003inch (143TC-286TC): +0.000inch ~ -0.005inch (324TC-449TC)

APPD BY	S.K.HAN	UNIT	inch	SUBJECT	NEMA 445TC	DWG SIZE	A4 < 11 >
CHKD BY	S.Y.KIM	SCALE	None	TITLE OUTLINE			
CHKD BY	Y.H.BAE	PROJEC'N	3rd Angle				
DSND BY	H.C.LIM	DATE	2019-06-05				
				REF. NO	350A1318AA	Sheet No.	of
				DWG NO	LM-T1445C4PL001	Revision No.	0

Cls. I&II, Div. 2

IEEE 841



SEC. "A" - "A"

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REV'D BY	CHK'D BY	CHK'D BY	APP'D BY	일반기공표	일반계관표
1							1-4 ±0.1 6-30 ±0.5	
							4-18 ±0.2 30-120 ±0.8	
							18-63 ±0.3 120-315 ±1.2	
							63-250 ±0.5 315-1000 ±2.0	
							250- ±0.8 1000- ±3.0	

Q'TY	DESCRIPTION	MATERIAL	DIMENSION	WEIGHT	PART NO.	REMARK	NO.
APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. 400-440 (CAST IRON)	DWG SIZE	
CHKD BY		SCALE	1/1.2	TITLE	MAIN TERMINAL BOX ASS'Y	A3 (1:1.2)	
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	네슬피	DATE	2023-10-19	DWG NO	3M-248451	Revision No.	0

