HD HYUNDAI ELECTRIC

Essential for Today
Potential for Tomorrow

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.	HES15-18-160S/M	Item No.		Rev. No.	[ ]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION

Frame Size		160M
Type		PJP
Enclosure(Protection)		Totally Enclosed / IP55
Method of Cooling		IC411(FC)
Rated Frequency		60 Hz
Number of Phases		3
Insulation Class		F
Temp. Rise at full load (by resistance method)		
	at 1.0 S.F	80 deg. C
Motor Location		☐ Indoor ☐ Outdoor
Altitude		Less than 1,000 meter
Relative Humidity		Less than 80 %
Ambient Temp.		40 deg. C (Max.)
Duty Type		Continuous (S1)
Service Factor		1.15
Mounting		B3
Bearing	Type	Anti-Friction
	DE/N-DE	6309ZC3 / 6309ZC3
	Lubricant	Grease(Polyrex-EM)
External Thrust		Not applicable
Coupling Method		☑ Direct ☐ V-belt
Shaft Extension		Single
Terminal Box	Main	Cast Iron
	Aux.	No
	Location	Refer to Outline Drawing
Application		
Area classification		Hazardous
Type of Ex-Protection		Class I&II, Division 2
Applicable Standard		IEC, CSA C390

PERFORMANCE DATA

Rated Output		11 kW	15 HP
Number of Poles		4	
Rotor Type		Squirrel Cage	
Starting Method*		D.O.L	
Rated Voltage		460 V	
Current	Full Load	19.7 A	
	Locked-rotor**	780 %	
Efficiency			
	50% Load	89.4 %	
	75% Load	91.4 %	
	100% Load	92.4 %	
Power Factor(p.u)			
	50% Load	0.610	
	75% Load	0.710	
	100% Load	0.760	
Speed at Full Load		1775 r.p.m	
Torque			
	Full Load	43.66 lb.ft	
	Locked-rotor**	200 %	
	Breakdown**	260 %	
Moment of Inertia (J)			
	Load(Max.)	88.111 lb.ft2	
	Motor	2.136 lb.ft2	
Sound Pressure Level (No-load & mean value at 1m from motor)		70 dB(A)	
Vibration		2.8 mm/s (r.m.s)	
Permissible number of consecutive starts		Cold 3 times	
		Hot 2 times	
Paint	PANTONE	PANTONE279C	

ACCESSORIES

SPARE PARTS

SUBMITTAL DRAWING

Outline Dimension Drawing	\ Motor Weight(Approx.)	
B3	LM-T2163B3PTV09	240 lb.

REMARK

1. IE3 (Premium efficiency) according to IEC60034-30-1
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 200Fr.)
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 : T3C(160°C) at sine wave

Date	DSND	CHKD	CHKD	APPD
2025-09-19	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.

HD HYUNDAI ELECTRIC

본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (취급유의)

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

▣ MAIN NAMEPLATE

4.72

2.36

CROWN TRITON G2 IEC
Premium Efficiency AC 3 Phase Motor Metric

Energy Verified · CC038A

11kW (15HP)	4P	460V	Encl.	IP55(TEFC)	Cat. No.	HES15-18-160S/M	
UL Model	HLS163SR288V		S.F.	1.15	Amps	19.7A	
Frame	160M	Duty S1(CONT)	INS. Class	F HD-F1	Hertz	60Hz	
UL Type	HLS		Code	K NEMA Design B Torque	Eff.	92.4%	3/4 Eff. 91.4%
Bearing	Drive 6309ZC3		Amb.	40°C	RPM	1775	P.F. 0.760
	Opp. 6309ZC3		S.F.1.00(10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)				
Usable at	50Hz 15HP 380V 23.1A 1475rpm S.F.: 1.15 Eff.: 91.4% Code: J						
	50Hz 15HP 400/415V 23.2/23.6A 1475/1475rpm S.F.: 1.15 Eff.: 91.4/91.4% Code: J/J						

CSA Certified for			Temp. Code (sine wave)	Frame	71~200FR	225~250FR	280FR
Model TPO1128916MH004AI0JT300001	Type PJP			Amb. 40°C	T3C (160°C)	T3B (165°C)	T3A (180°C)
CLASS I, Div. 2, Gr. A, B, C & D CLASS I, Zone 2, Gr. IIA, IIB, & IIC	CLASS II, Div. 2 Gr. E, F & G (Gr. E : Up to 200FR)			Amb. 55°C	T3A (180°C)	T3A (180°C)	T3 (200°C)

No.	-	Date	-	Weight	110 kg (240 lb)

4M-133043 IEC60034-1
Made in Vietnam H4 Designed By HYUNDAI, Korea

IEC 60034-30-1(IE3)

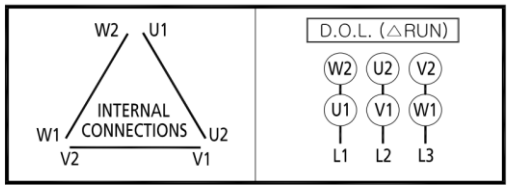
HD HYUNDAI ELECTRIC

▣ WIRING DIAGRAM

D.O.L (INVERTER & SOFT STARTER)

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-137622

WYE-DELTA (Y-D)

WARNING

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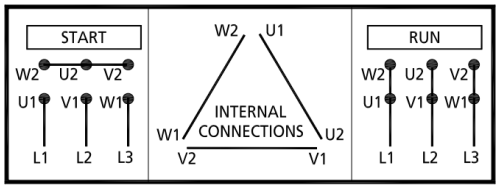

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4M-130346

APPD BY	S.Y.KIM	UNIT	INCH
CHKD BY	I.K.KIM	SCALE	NONE
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle
DSND BY	S.H.LEE	DATE	2024.06.07

HD HYUNDAI ELECTRIC

SUBJECT	CSA Class I, Division2 Severe Duty (IEC, 160-280)	DWG SIZE	A4 (1:1)
TITLE	NAMEPLATE DRAWING		
REF. NO	4M-133043 / 4M-137622	Sheet No.	of
DWG NO	NP-HES15-18-160S/M	Revision No.	0

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HYUNDAI ELECTRIC

PERFORMANCE CURVE

CURVE NO.

PC-HES15-18-160S/M

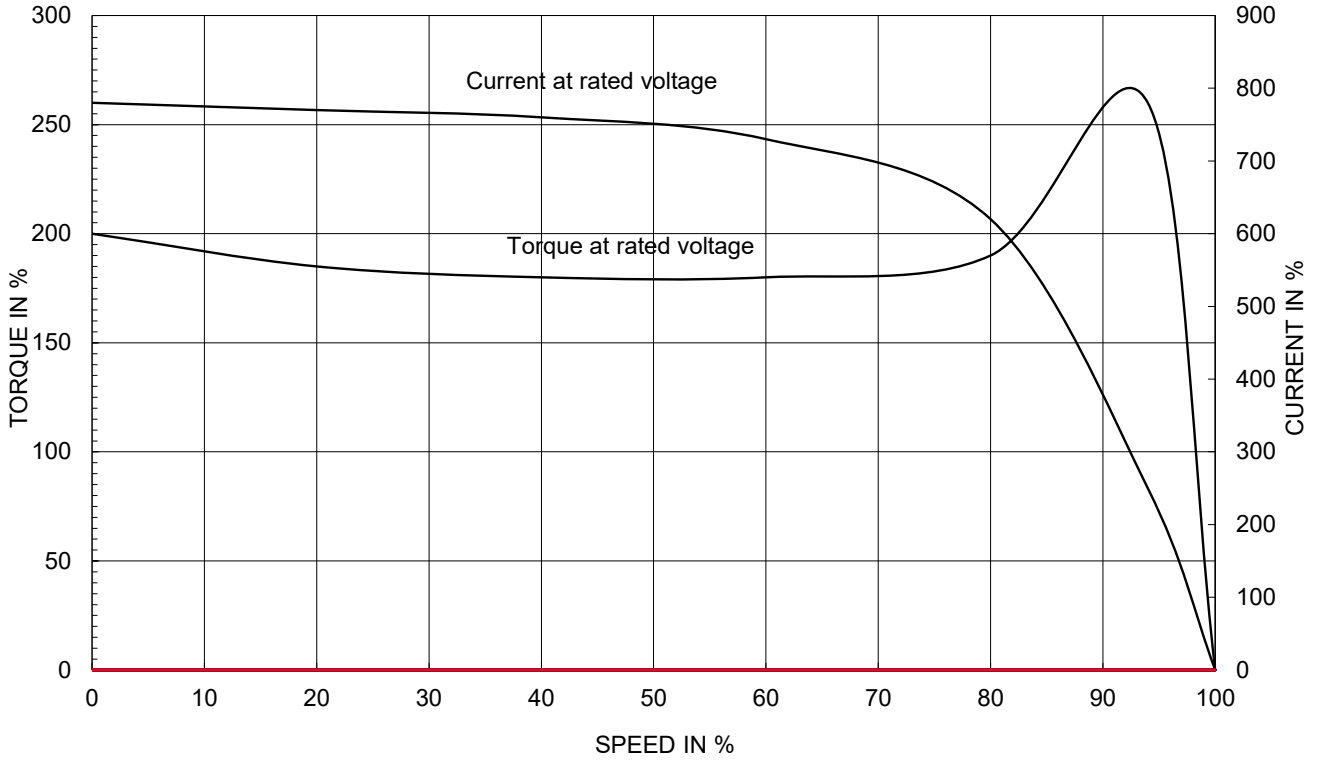
Type :	PJP	
Full Load Torque :	43.66	lb.ft
Load moment of Inertia (J) :	88.111	lb.ft2
Motor moment of Inertia (J) :	2.136	lb.ft2

11kW 15HP 4 P 60 Hz

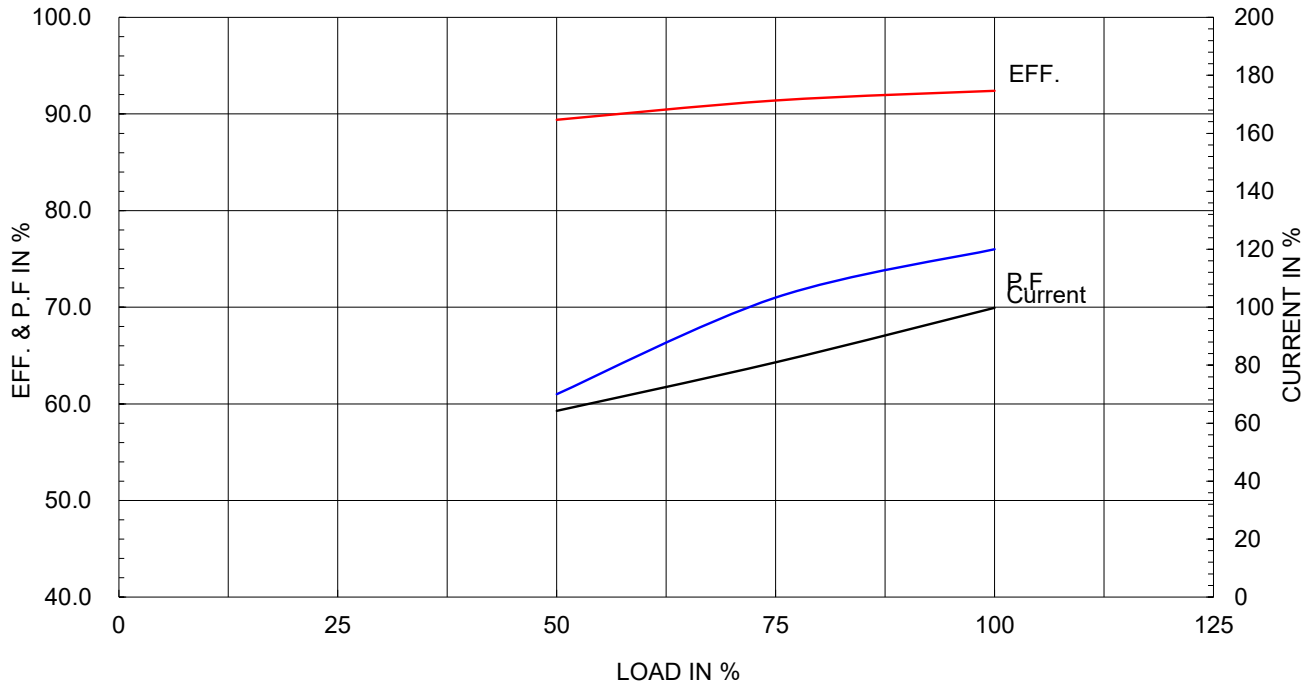
Speed at Full Load : 1775 RPM

Rated Voltage		460V	
Full Load Current		19.7A	

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



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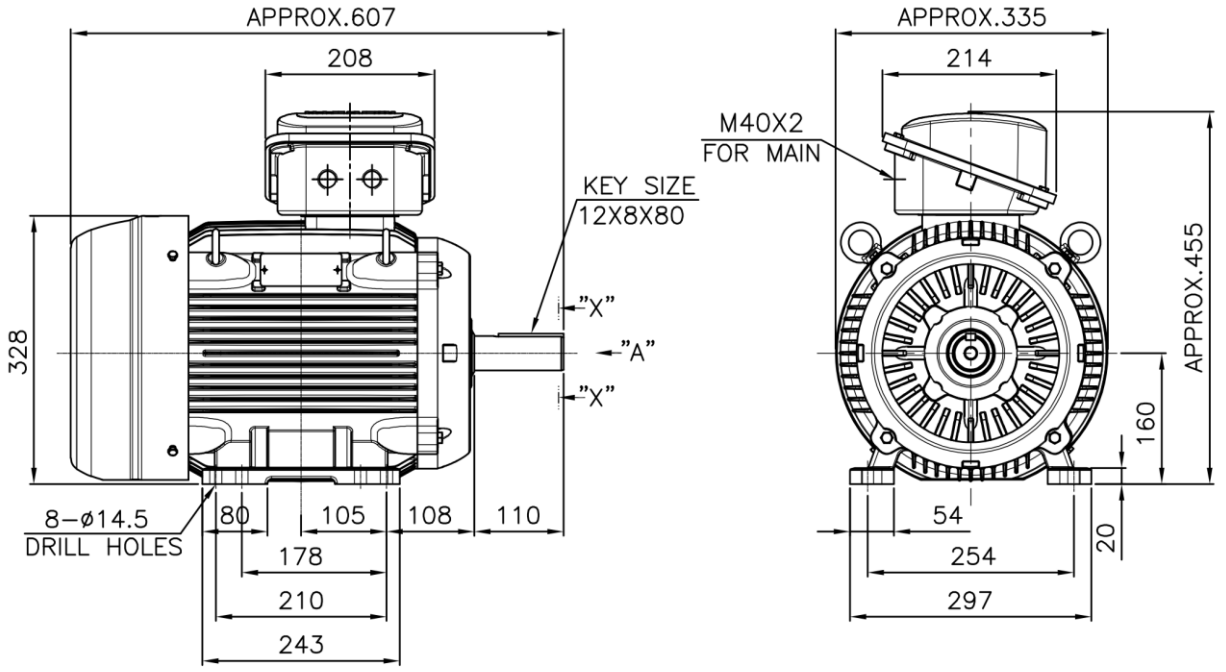
허가없이 복사할 수 없음 (취급유의)

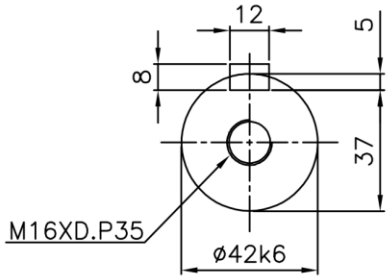
		REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
▽	50S							
▽▽	12.5S							
▽▽▽	3.2S							
▽▽▽▽	0.4S							



NOTE

1.TOLERANCE :

CENTER HEIGHT	160	$^{0}_{-0.5}$
BASE HOLES	ø14.5	$^{+0.43}_{0}$
SHAFT DIAMETER	ø42	$^{+0.018}_{+0.002}$
KEYWAY WIDTH	12	$^{0}_{-0.043}$
KEYWAY DEPTH	5	$^{+0.2}_{0}$
KEY WIDTH	12	$^{0}_{-0.043}$
KEY HEIGHT	8	$^{0}_{-0.090}$



SECTION "X-X"
SCALE 4/9

APPD BY	S.Y.KIM	UNIT	mm
CHKD BY	R.G.KIM	SCALE	1/9
CHKD BY		PROJEC'N	3rd Angle
DSND BY	J.H.JEON	DATE	2022.05.25

SUBJECT	IEC 160S/M (Dual hole)		DWG SIZE A4 (1:9)
TITLE	OUTLINE		
REF. NO		Sheet No.	of
DWG NO	LM-T2163B3PTV09	Revision No.	0

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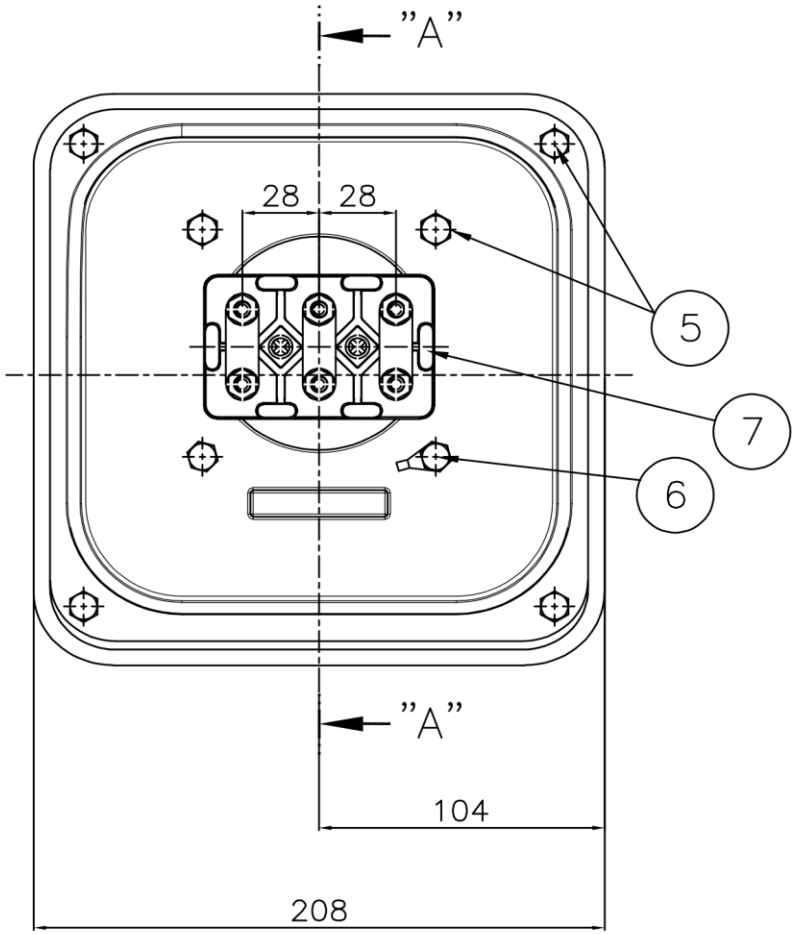

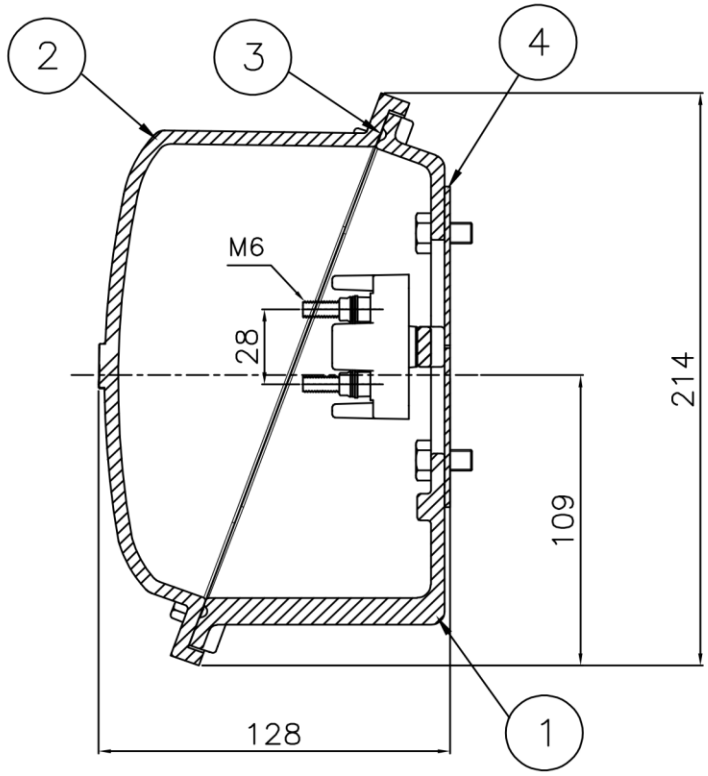

SEC. "A"–"A"

Q'TY	DESCRIPTION	MATERIAL	DIMENSION	WEIGHT	PART NO.	REMARK	NO.
1	TERMINAL BLOCK	STD	M6				7
1	GROUND TERMINAL LUG	CU	--				6
8	BOX+FRAME HEX BOLT	S45C	M6				5
1	BOX GASKET	NBR	--				4
1	COVER GASKET (O-RING)	NBR	--				3
1	CONDUIT BOX COVER	CAST	--				2
1	CONDUIT BOX	CAST	--				1

APPD BY	S.Y.KIM	UNIT	mm
CHKD BY	I.K.KIM	SCALE	1/2
CHKD BY	–	PROJEC'N	3rd Angle
DSND BY	주유림	DATE	2021-12-17

SUBJECT: FR.160-180 (CAST IRON, T-BLOCK) | DWG SIZE: A3 (1:2)

TITLE: TERMINAL BOX ASS'Y

REF. NO | Sheet No. of

DWG NO: 3M-241780(T) | Revision No. 0

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

일반기공공차		일반제관공차	
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

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