

# PRODUCT INFORMATION PACKET



Model No: 171778.60  
Catalog No: 171778.60  
Severe Duty Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V, 3600 & 3000 RPM,  
284TS Frame, TEFC



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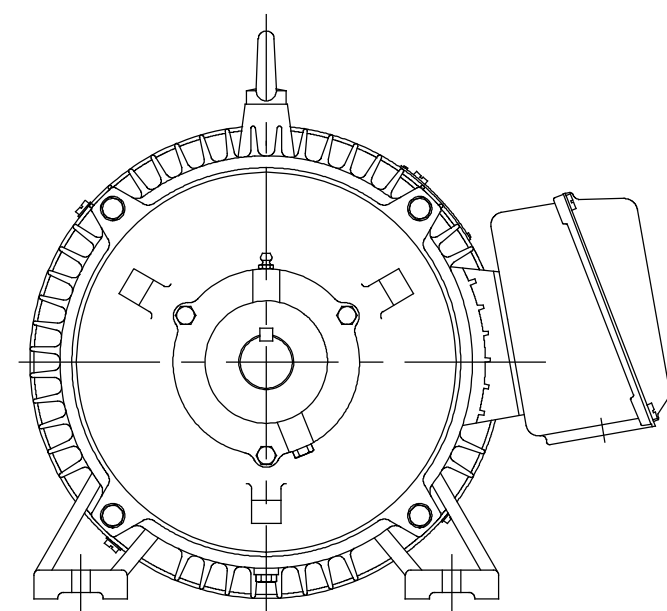
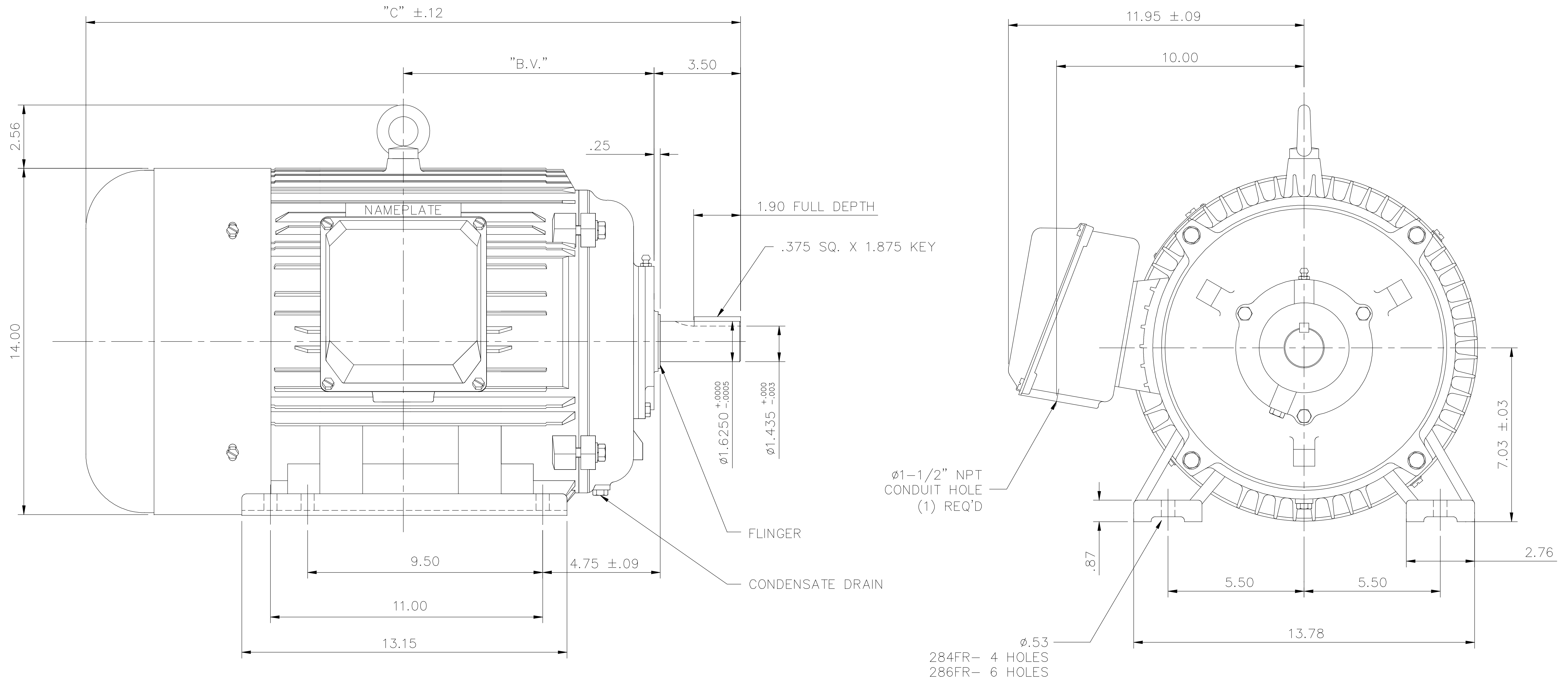


### Nameplate Specifications


Phase	3	Output HP	25 & 20 Hp
Output KW	18.7 & 14.9 kW	Voltage	208-230/460 & 190/380 V
Speed	3555 & 2955 rpm	Service Factor	1.15 & 1.15
Frame	284TS	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	93 & 93 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	63-56.5/28.3 & 53.5/26.8 A	Power Factor	88
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6309
UL	Recognized	CSA	Y
CE	Y	IP Code	55
Number of Speeds	1		

### Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Wye Start Delta Run Or Inverter
Poles	2	Rotation	Reversible
Resistance Main	.225 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	TS	Overall Length	24.88 in
Shaft Diameter	1.625 in	Shaft Extension	3.25 in
Assembly/Box Mounting	F1/F2 CAPABLE	Inverter Load	VARIABLE 10:1
Connection Drawing	00417203	Outline Drawing	16954060-284TS

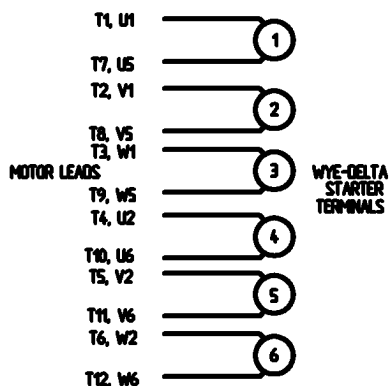


FRAME DESIGN	"C"	"BV"
284TS	24.88	4.72
286TS	26.46	3.97

NO.	REVISION	BY & DATE	CHK	TOLERANCES UNLESS SPECIFIED		REGAL-BELOIT CORPORATION	DRAWN JJK 03/29/99	
				DEC.	INCHES			
H	ADDED F2 VIEW ECO-0134445	WGJ 11/10/2017	EMH	.X	±.1	 <b>REGAL-BELOIT CORPORATION</b> TITLE OUTLINE-280TS FRAME, TEFC-RIGID NEW CONDUIT BOX MAT'L. CAST IRON FINISH	CHK	
03	REMOVED REFERENCE TO 250 FRAME	MOL 08/15/2012		.XX	±.03		APPD PG 03/31/99	
02	REDRAWN TO CURRENT CAD STANDARDS	CJK 11/1/01		.XXX	±.005		SCALE 1=4	
01	ADDED HOLES 286TS BASE	JJK 07/13/99		.XXXX	±.0005		REF	
				ANG	±7'30"		FMF	
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT				RFP	CAD FILE 16954060	SIZE B	DRAWING NO. 169540-60	PAGE OF H
				DIST			REV. H	

WYE - DELTA STARTING USEABLE ON 2,4 AND 6 POLE MOTORS.

LOW VOLTAGE CONNECTION

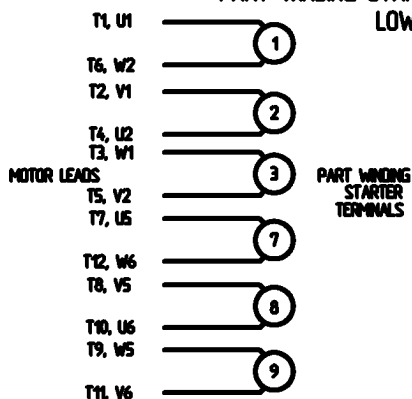


HIGH VOLTAGE CONNECTION



REFER TO THE WYE-DELTA STARTER CONNECTION INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

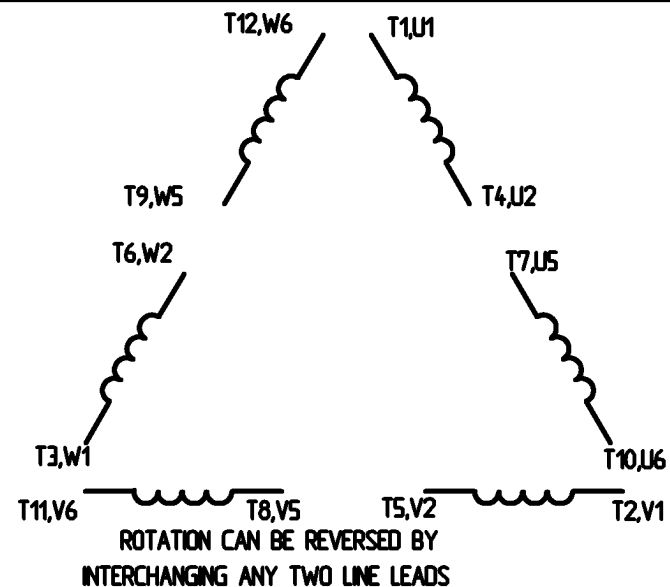
PART WINDING START USABLE ON 4 & 6 POLE MOTORS  
LOW VOLTAGE CONNECTION ONLY



REFER TO THE PART WINDING STARTER INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

REFER TO THE CUTLER - HAMMER OR EQUIV. FOR PROPER SELECTION OF OVERLOAD HEATER COILS.

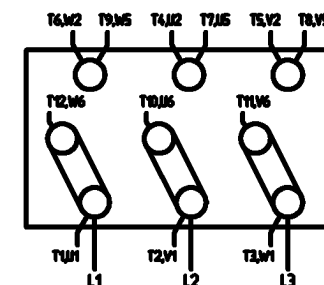
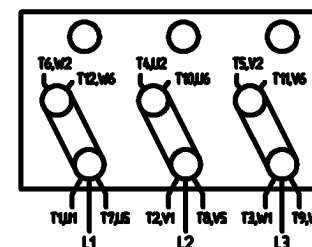
LINE LEADS



12 LEAD DELTA CONNECTION ACROSS THE LINE START  
(FOR Y START DELTA RUN, REMOVE THE JUMPERS)

LOW VOLTAGE  
MUST BE REWIRED  
AS SHOWN

HIGH VOLTAGE  
FACTORY WIRED FOR HIGH  
VOLTAGE AS SHOWN



				TOLERANCES UNLESS SPECIFIED		<b>LEESON</b> ELECTRIC MOTORS GEARMOTORS AND DRIVES	DRAWN	CJW 08/28/02	
				DEC.	INCHES		CHK		
				X	+ .1	TITLE DELTA - WYE CONNECTION DIAGRAM IEC CAST IRON MOTORS	APPO		
				XX	+ .01		SCALE	1:1	
				XXX	+ .005		REF		
				XXXX	+ .0005		FINISH		
NO.	REVISION	BY & DATE	CHK	ANG	+ 1/2°	RFP	CAD FILE	00417203	
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						DST		REV.	

ERROR: syntaxerror  
OFFENDING COMMAND: --nostringval--

STACK:

/CB  
-dictionary-  
/Pscript\_WinNT\_Compat  
-dictionary-



**1051 CHEYENNE AVE.  
GRAFTON, WI 53024  
PH. 262-377-8810**

**CERTIFICATION DATA SHEET**

**CONN. DIAGRAM:** 00417203

**CATALOG #:** 171778.60

**OUTLINE:** SS622180LE

**MOUNTING:** F1/F2 CAPABLE

**WINDING #:** T18306021 FR 3 A

**TYPICAL MOTOR PERFORMANCE DATA**

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
50&40	37.0&30.0	1200	1190&990	365T	TEFC	G	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB° C
3	60/50	208-230/460&190/380	135.0 - 126/63.0&122/61.0	Y START D RUN OR INV	CONTINUOUS	F5	1.15/1.15	40

FULL LOAD EFF:	94.1&93.6	3/4 LOAD EFF:	94.1	1/2 LOAD EFF:	93.6	GTD. EFF		ELEC. TYPE	
FULL LOAD PF:	79&79.5	3/4 LOAD PF:	74.5	1/2 LOAD PF:	64.5	93.6		SQ CAGE INV RATED	

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
220.6 LB-FT	722 / 361	453.2 LB-FT 205 %	596.1 LB-FT 270 %	76

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
- dBA	- dBA	- LB-FT^2	- LB-FT^2	15 SEC.	2	- LBS.

**\*\*\* SUPPLEMENTAL INFORMATION \*\*\***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	DIVISION 2	FALSE	NONE	GREEN (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE						
BALL	BALL	POLYREX EM	T	NONE	NONE	AISI 1045 (C-240)	CAST IRON
6313	6313						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
NONE	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

\*  
N  
O  
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E

<b>INVERTER TORQUE:</b> VARIABLE 10:1
<b>INV. HP SPEED RANGE:</b> NONE
<b>ENCODER:</b> NONE
NONE NONE
NONE NONE PPR
<b>BRAKE:</b> NONE NONE
NONE P/N NONE

Data Sheet

Date: 1/31/2018

171778.60



Data @ **460 V**

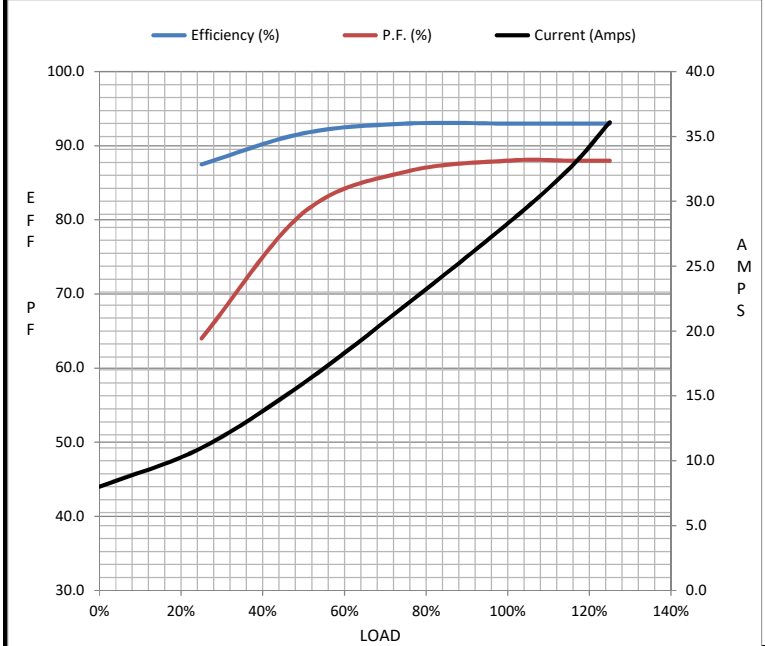
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	8.0	11.0	16.0	22.0	28.3	32.5	36.1	182
Torque (ft-lb)	0.00	9.2	18.5	27.6	37.0	42.5	46.5	72.0
RPM	3600	3583	3576	3568	3555	3,550	3540	0
Efficiency (%)		87.5	91.7	93.0	93.0	93.0	93.0	
P.F. (%)	7.5	64.0	81.0	86.5	88.0	88.0	88.0	0.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3350	3555	3600
Current (Amps)	182	165	125	28.3	8.0
Torque (ft-lb)	72.0	65.0	102	37.0	0.00

Information Block				
HP	25.0			
Sync. RPM	3600			
Frame	284			
Enclosure	TEFC			
Construction	TFC			
Voltage	208-230/460#190/380 V			
Frequency	60 Hz			
Design	A			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	60 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	1.90 Lb-Ft <sup>2</sup>			
Ref Wdg	T14502016 NONE			
Sound Pressure @ 1M	999 dBA			
VFD Rating	VARIABLE 10:1			
Outline Dwg	16954060			
Conn. Diag	00417203			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0000	0.0000	0.0000	0.0000	0.0000



Speed - Torque Curve

