

PRODUCT INFORMATION PACKET

Model No: 405TSTGS6503

Catalog No: E578

Hazardous Duty® Explosion Proof Motor, 100 HP, 3 Ph, 60 Hz, 230/460 V, 3600 RPM, 405TS Frame, EPFC



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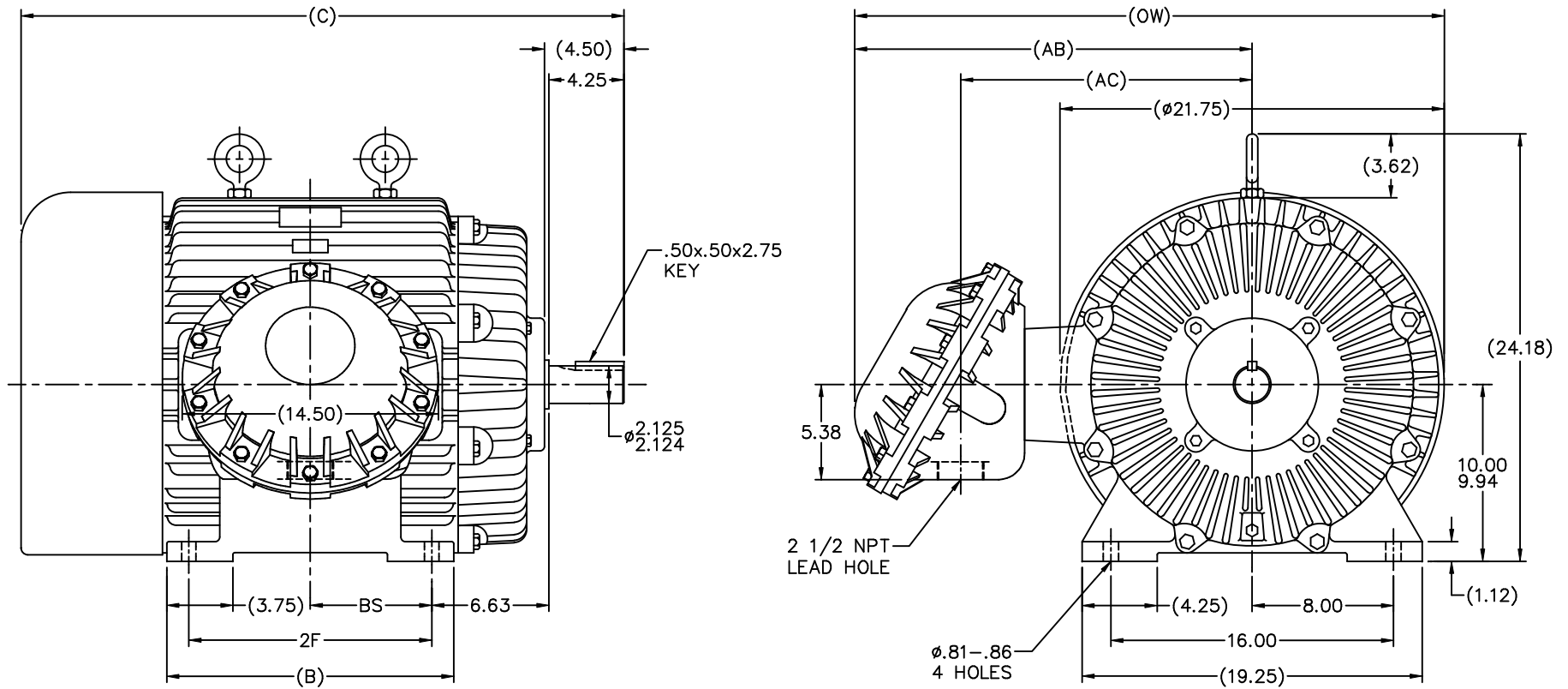
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Nameplate Specifications

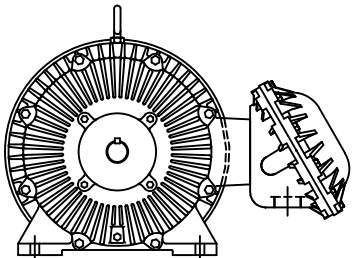
Phase	3	Output HP	100 Hp
Output KW	75.0 kW	Voltage	230/460 V
Speed	3565 rpm	Service Factor	1.15
Frame	405TS	Enclosure	Explosion Proof Fan cooled
Thermal Protection	Thermostat	Efficiency	94.5 %
Ambient Temperature	40 °C	Frequency	60 Hz
Current	216.0/108.0 A	Power Factor	91.5
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Drive End Bearing Size	6313	Opp Drive End Bearing Size	6313
UL	UL Listed And CSA Certified	CSA	Y
CE	N	IP Code	54
Number of Speeds	1	Hazardous Location	DIV 1 EXP PROOF CL I GR CD CL II GR FG T3B

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	2	Rotation	Reversible
Resistance Main	.051 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	34.12 in
Frame Length	16.75 in	Shaft Diameter	2.125 in
Shaft Extension	4.5 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 10:1		
Outline Drawing	B-SS518935-1675	Connection Drawing	A-EE7308AD



F2 VIEW

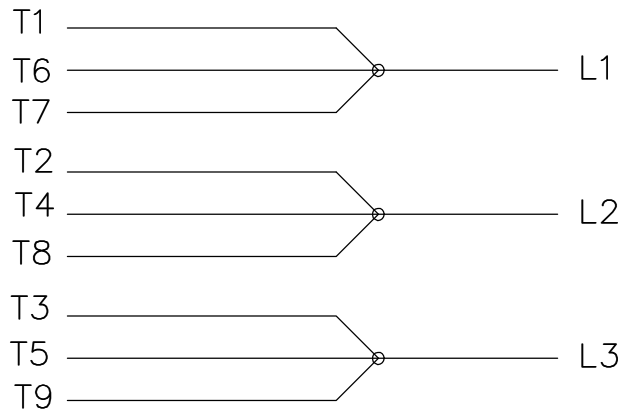


- NOTES:
 1. BOX CAN BE ROTATED IN 90° STEPS.
 2. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

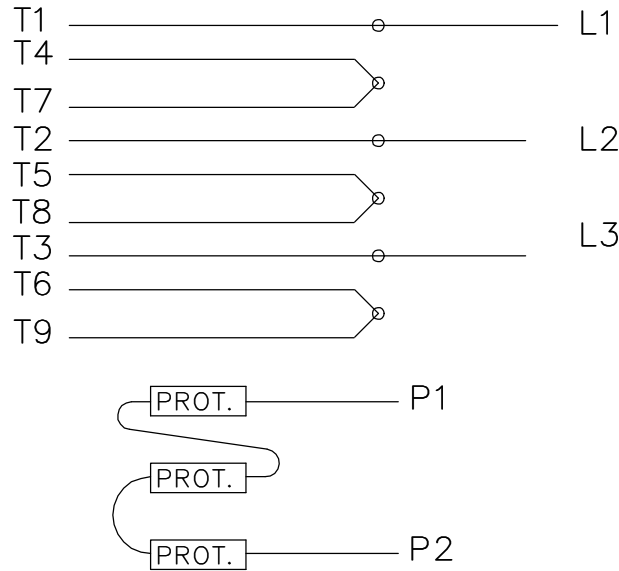
DASH	FRAME	B	C	2F	AB	AC	BS	OW
1525	404TS	14.75	32.62	12.25	21.50	15.50	6.12	32.38
1675	405TS	16.25	34.12	13.75	22.50	16.50	6.88	33.38

		TOLERANCES UNLESS SPECIFIED		MARATHON ELECTRIC		DRAWN MSG 03-08-2002	
		DEC.	INCHES			CHK	JHL 03-19-2002
		.X	±.1			APPD	JES 03-20-2002
3	ADDED F2 VIEW	RWR	08-07-2007	ML	.XX ±.03	TITLE OUTLINE	
2	UPPDATED DRAWING	RJW	05-08-2007	ML	.XXX ±.005	400TS FR. - EXP. PROOF - (STD)	
1	NEW DRAWING CN34593	MSG	03-20-2002	JHL	.XXXX ±.0005	MATL	
NO.	REVISION	BY & DATE		CHK	ANG	FINISH	
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	±7'30"	CAD FILE SS518935	
						SIZE	DRAWING NO. PAGE OF REV.
						B	SS518935 3

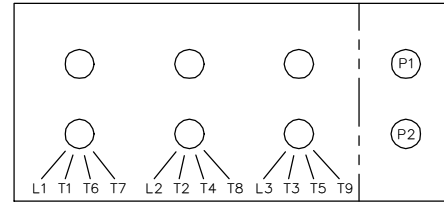
LOW VOLTAGE



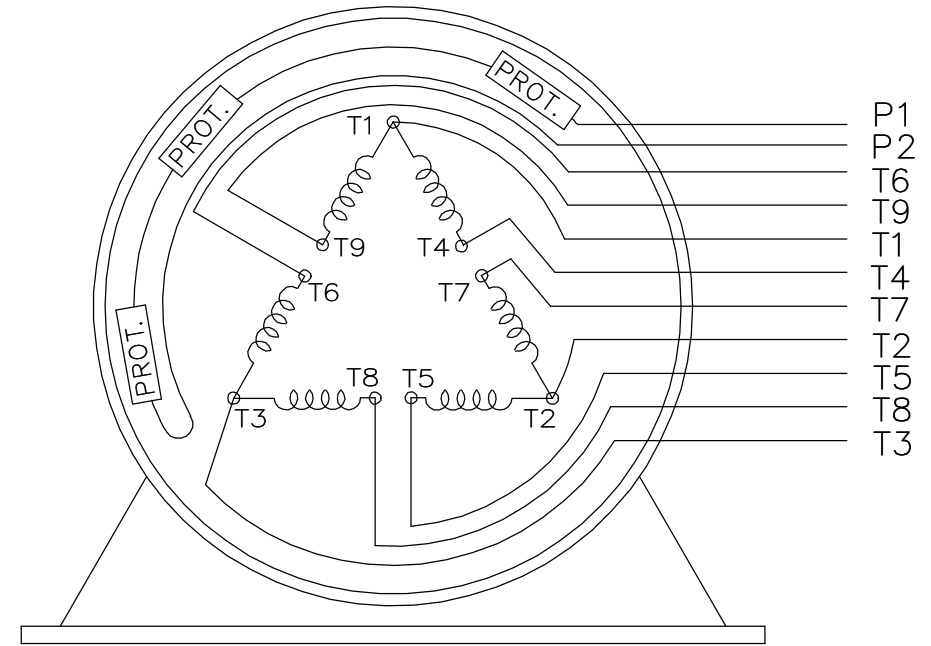
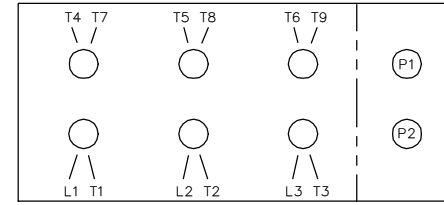
HIGH VOLTAGE



LOW VOLTAGE



HIGH VOLTAGE



VIEW OF TERMINAL END

WHEN MORE THAN ONE PROT. IS USED; PROT. ARE CONNECTED IN SERIES

DRAWING REVISION L		REVISION BY JP	REV DATE/© DATE 06-21-2019	TOLERANCES (EXCEPT AS NOTED): DEC. INCH mm ANGLE		DRAWN BY MJD		Regal Beloit America, Inc.		
ECO ECO-0168744		APPROVED BY MH	DATE 06-21-2019	.X ±0.1 [±3]	DATE 12-19-1997	APPROVED BY GK				DESCRIPTION CONN DIAGRAM-EXTERNAL
ECO DESCRIPTION UPDATED TO CURRENT STANDARDS				.XX ±0.02 [±0.5]		DATE 01-07-1998		MATERIAL		PROCESS/FINISH
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				.XXXX ±0.0005 [±0.013]		THIRD ANGLE PROJECTION		SIZE A		

CERTIFICATION DATA SHEET

Model#: 405TSTGS6503 BR **WINDING#:** T405247 R3 1
CONN. DIAGRAM: A-EE7308AD **ASSEMBLY:** F1 ONLY
OUTLINE: B-SS518935-1675

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
100	75	3600	3565	405TS	EPFC	G	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	230/460	216/108	LINE OR INVERTER	CONTINUOUS	F1	1.15	40	3300

FULL LOAD EFF: 94.5	3/4 LOAD EFF: 94.5	1/2 LOAD EFF: 94.1	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 91.5	3/4 LOAD PF: 90.5	1/2 LOAD PF: 86	93.6	SQ CAGE INV RATED	48 / 24

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
147 LB-FT	1450 / 725	230 LB-FT 156	410 LB-FT 279	65

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
80 dBA	90 dBA	16.5 LB-FT^2	65 LB-FT^2	20 SEC.	2	1300 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	EXP PROOF CL I GR C&D CL II GR F&G T3B	FALSE	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL	BALL	POLYREX EM	TS	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6313	6313						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS (N/C)	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

If Inverter equals NONE, contact factory for further information

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INVERTER TORQUE: CONSTANT 10:1
INV. HP SPEED RANGE: NONE
ENCODER: NONE
NONE NONE
NONE NONE PPR
BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
NONE FT-LB NONE V NONE Hz

DATE: 06/22/2017 12:13:13 AM
 FORM 3531 REV.3 02/07/99
 ** Subject to change without notice.

Data Sheet

Date: 16-06-2017
 Customer: _____
 Attention: _____
 Submitted by: FAREEDA DUDEKULA



405TSTGS6503

Submittal

Data @ 460 V

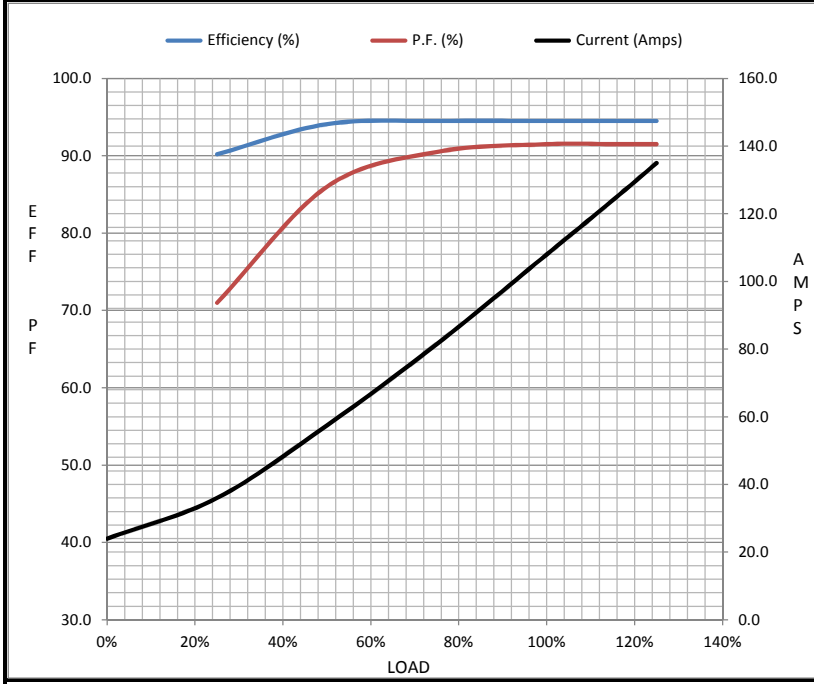
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	24.0	36.0	57.5	81.5	108	124	135	725
Torque (ft-lb)	0.00	36.5	73.5	110	147	170	185	230
RPM	3600	3592	3582	3572	3565	3,560	3555	0
Efficiency (%)		90.2	94.1	94.5	94.5	94.5	94.5	
P.F. (%)	7.5	71.0	86.0	90.5	91.5	91.5	91.5	31.0

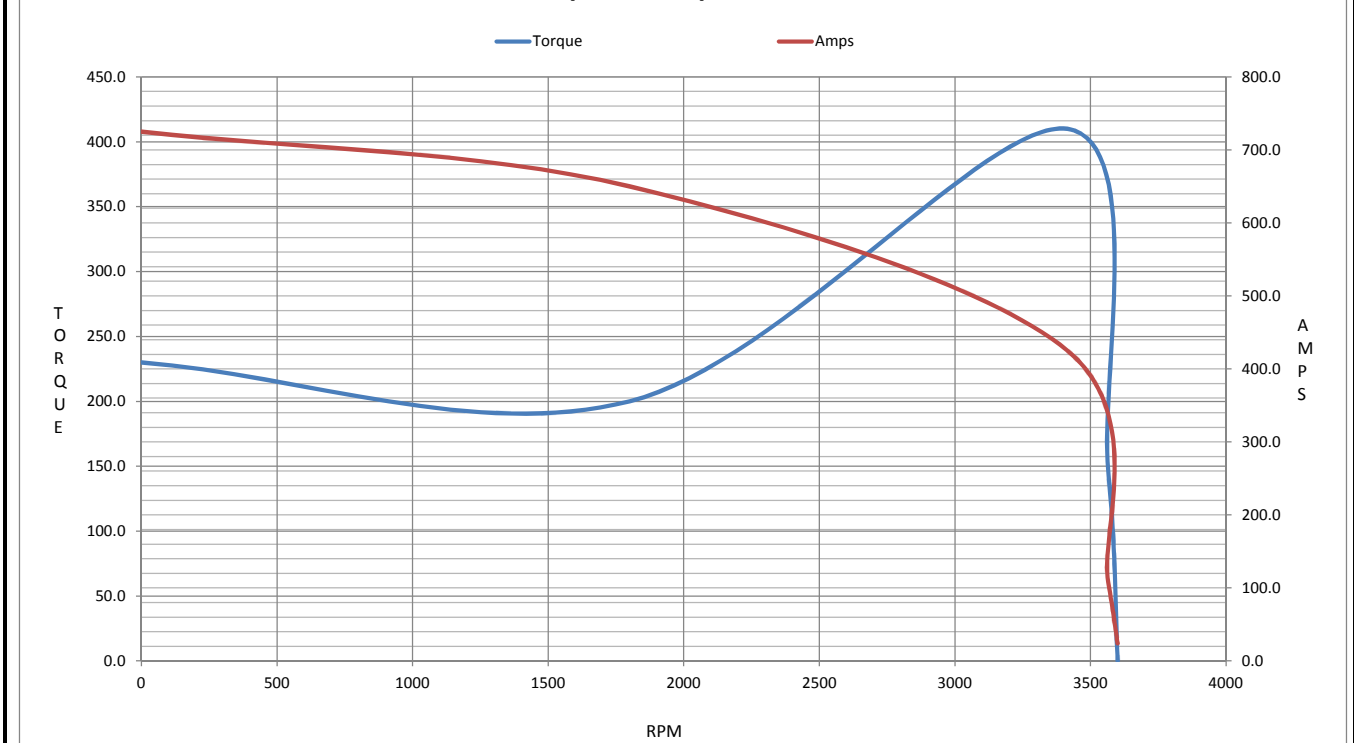
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3415	3565	3600
Current (Amps)	725	650	425	108	24.0
Torque (ft-lb)	230	200	410	147	0.00

Information Block				
HP	100.0			
Sync. RPM	3600			
Frame	405			
Enclosure	TEFC			
Construction	TFS			
Voltage	230/460 V			
Frequency	60 Hz			
Design	A			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	65 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	16.5 Lb-Ft ²			
Ref Wdg	T405247 R3			
Sound Pressure @ 1M	80 dBA			
VFD Rating	CONSTANT 10:1			
Outline Dwg	B-SS518935-1675			
Conn. Diag	A-EE7308AD			
Additional Specifications:				
0				
365THFS8036				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0390	0.0240	0.2690	0.2040	10.8200



Speed - Torque Curve



CERTIFICATE OF COMPLIANCE

Certificate Number 20220524- E12044
Report Reference E12044-19750529
Issue Date 2022-MAY-24

Issued to: REGAL BELOIT AMERICA INC
1946 W COOK RD
FORT WAYNE IN 46818

Tradename: Marathon

**This certificate confirms that
representative samples of**

MOTORS FOR USE IN HAZARDOUS LOCATIONS
Electric motors for use in hazardous locations; Class I,
Groups C and D; Class II, Groups F and G; Inclusive of
Model Number 405TSTGS6503 (may have prefix and/or
suffix characters).

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 674 - Electric Motors and Generators for Use in Division
1 Hazardous (Classified) Locations,
CSA C22.2 No. 145, Electric Motors and Generators for
Use in Hazardous (Classified) Locations

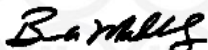
Additional Information: See the UL Online Certifications Directory at
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Look for the UL Certification Mark on the product.

This is to certify that representative samples of the product as specified on this certificate were tested
according to the current UL requirements.



Bruce Mahrenholz, Director North American Certification Program

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