

BALDOR® • *RELIANCE*

Product Information Packet

D50400R-BV

400HP, 1750RPM, DC, 4013ATZ, DPG-FV,

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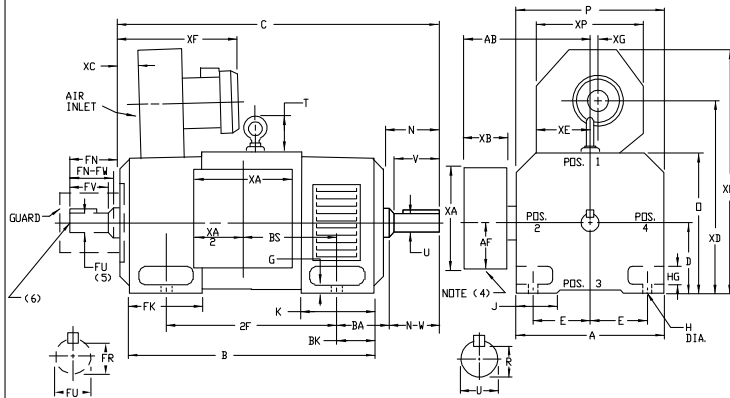
Part Detail			
Type:	DC	Prod. Type:	TR
Power Code:	C	Weight:	3040
Frame Group:	MC 4013ATZ	Mounting Pos.:	F2
HP:	400	Enclosure:	DPFV
RPM:	1750/2000	Wound:	STR. SHUNT
Service Factor:	1.0	Arm V:	500
Arm A:	640.00	Field V:	300
Field A:	11.94	Field A Hot:	8.27/7.10
Insulation Class:	F	Ambient:	40
Duty:	CONT	DE Bearing:	95BC02J30X
ODE Bearing:	95BC02J30X	Brushes:	419904-52AB
Brush Qty.:			

609962-013

INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III

ENCLOSURE: DRIP-PROOF FULLY-GUARDED COOLING: FORCE VENTILATED WITH INTEGRAL BLOWER AND MOTOR
MOUNTING: FOOT SPLASHPROOF ACCESSORIES: PROVISION FOR TACHOMETER MOUNTING ONLY WHEN SPECIFIED

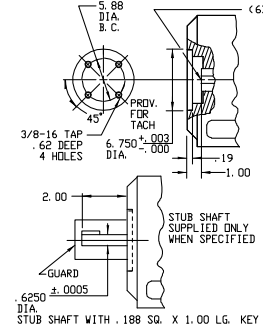
FRAMES C4011ATZ THRU ULC4013ATZ



DIMENSIONS ARE IN INCHES

FRAME	A	B	C	E	G	H	HG	J	D	P	T	BA	K	FK	BK	AB	AF	RK(6)
C4011ATZ-ULC4013ATZ	19.38	10.00	8.00	1.06	2.82	3.50	19.81	19.56	4.31	6.62	8.75	12.12	5.25	16.12	8.00	6.24		

FRAME	METHOD OF DRIVE	C(7)	B	BS	2F	DRIVE END SHAFT AND KEY						OPPOSITE DRIVE END SHAFT AND KEY				WT. LBS.				
						N-W	UC(2)	V	RC(3)	SO	LGTH	FN	FN-FW	FK(2)	FV		FR(3)	SO	LGTH	
C4011ATZ	COUPLED	58.19	46.06	16.00	28.00	7.62	7.25	3.625	7.00	3.134	.875	5.75	7.62	7.25	3.625	7.00	3.134	.875	5.75	2900
ULC4011ATZ	BELTED	58.19	42.06	16.00	28.00	8.62	8.25	4.125	8.00	3.5631	.000	6.50	7.62	7.25	3.625	7.00	3.134	.875	5.75	2905
MC4013ATZ	COUPLED	56.94	46.81	20.75	36.00	7.62	7.25	3.625	7.00	3.134	.875	5.75	7.62	7.25	3.625	7.00	3.134	.875	5.75	2800
UMC4013ATZ	BELTED	57.94	46.81	20.75	36.00	8.62	8.25	4.125	8.00	3.5631	.000	6.50	7.62	7.25	3.625	7.00	3.134	.875	5.75	2805
LC4013ATZ	COUPLED	60.19	50.06	24.00	36.00	7.62	7.25	3.625	7.00	3.134	.875	5.75	7.62	7.25	3.625	7.00	3.134	.875	5.75	3100
ULC4013ATZ	BELTED	61.19	50.06	24.00	36.00	8.62	8.25	4.125	8.00	3.5631	.000	6.50	7.62	7.25	3.625	7.00	3.134	.875	5.75	3105



FRAME	XA	XB	XC	XD	XE	XF	XG	XD	XP
C4011ATZ-ULC4013ATZ	16.00	6.00	6.88	26.00	8.69	23.50	3.38	33.62	15.12

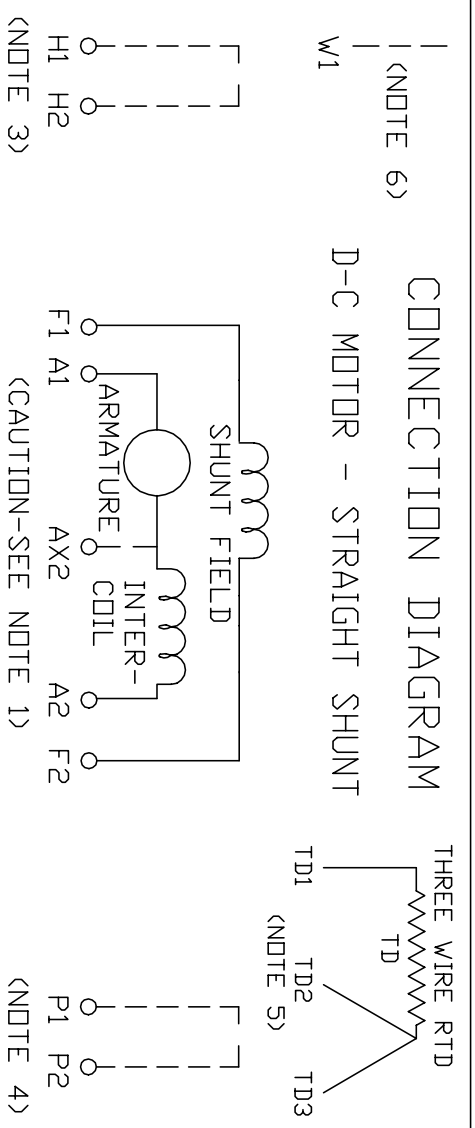
- (1) *B* DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .06 INCHES IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES.
 - (2) *F* AND *FV* VARY ----+.000 - .001
 - (3) *R* AND *FR* VARY ----+.000 - .015
 - (4) CUSTOMER TO PROVIDE HOLE IN TERMINAL BOX FOR CONDUIT.
 - (5) OPPOSITE DRIVE END SHAFT SUPPLIED ONLY WHEN SPECIFIED.
 - (6) MOTOR SHAFT TAPPED FOR SCREW-IN STUB SHAFT
 - (7) WHEN THE MOTOR APPLICATION DOES NOT REQUIRE THE USE OF OPP. DRIVE END, ADD .25 TO *C* DIM. FOR BRACKET COVER.
- TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, W-1, W-4, V-5, V-7, OR C-1 MOUNTING IS SPECIFIED. BOX LOCATED ON TOP WHEN SPECIFIED. BLOWER ASSEMBLY CAN BE LOCATED AT POSITIONS 1, 2, OR 4, EXCEPT BLOWER ASSEMBLY AND TERMINAL BOX CAN NOT BE LOCATED AT THE SAME POSITION. MOTOR WEIGHT MAY VARY 1% FOR NON-STANDARD RATINGS AND/OR ACCESSORIES. IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

REV. DESC: LOADED TO BUS	VERSION: 00	TDR: 000000577407
REV. LTR: -	REVISED: 12:04:54 01/26/2011	BY: CONNAS
FILE: \RGG\00015\600		
MTL: -		

BALDOR
DIMENSION DRAWING, C4011ATZ - ULC4013ATZ, DPP, FOOT MTG.
SH 1 of 1

609962-013



1. **CAUTION** — ARMATURE MAY HAVE MULTIPLE LEADS. CONNECT ALL LUGS WITH THE SAME MARKING TOGETHER.
2. OPTIONAL CONTROL SIGNAL LEAD IS MARKED AX2. ALWAYS TAKE INTERPOLE DROP BETWEEN A2 AND AX2. NOTE: NEMA DESIGNATION FOR AX2 IS LETTER C.
3. SPACE HEATERS, WHEN PROVIDED, WILL HAVE LEADS MARKED H1 AND H2, H3, H4, ETC.
4. THERMAL PROTECTOR, WHEN PROVIDED, WILL HAVE LEADS MARKED P1 AND P2, P3, P4, ETC.
5. WINDING RTD'S, WHEN PROVIDED, WILL HAVE LEAD MARKED W1.
6. BRUSH WEAR SENSOR, WHEN PROVIDED, WILL HAVE LEAD MARKED W1.
7. **WARNING** — MOTOR MUST BE GROUNDED TO PREVENT SERIOUS INJURIES TO PERSONNEL. GROUND THE MOTOR PER IEC, NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL ELECTRICAL CODES. A TAPPED HOLE IS PROVIDED IN THE CONDUIT BOX, ON THE FOOT. FRAME BRACE OR OPPOSITE OPPOSITE DRIVE END BRACKET, ADJACENT TO THE TERMINAL BOX FOR FOR MOTOR GROUNDING. GROUND LEAD, WHEN PROVIDED, WILL BE GREEN.

CUSTOMER _____ RELIANCE _____
 ORDER NO. _____ S.O. NO. _____

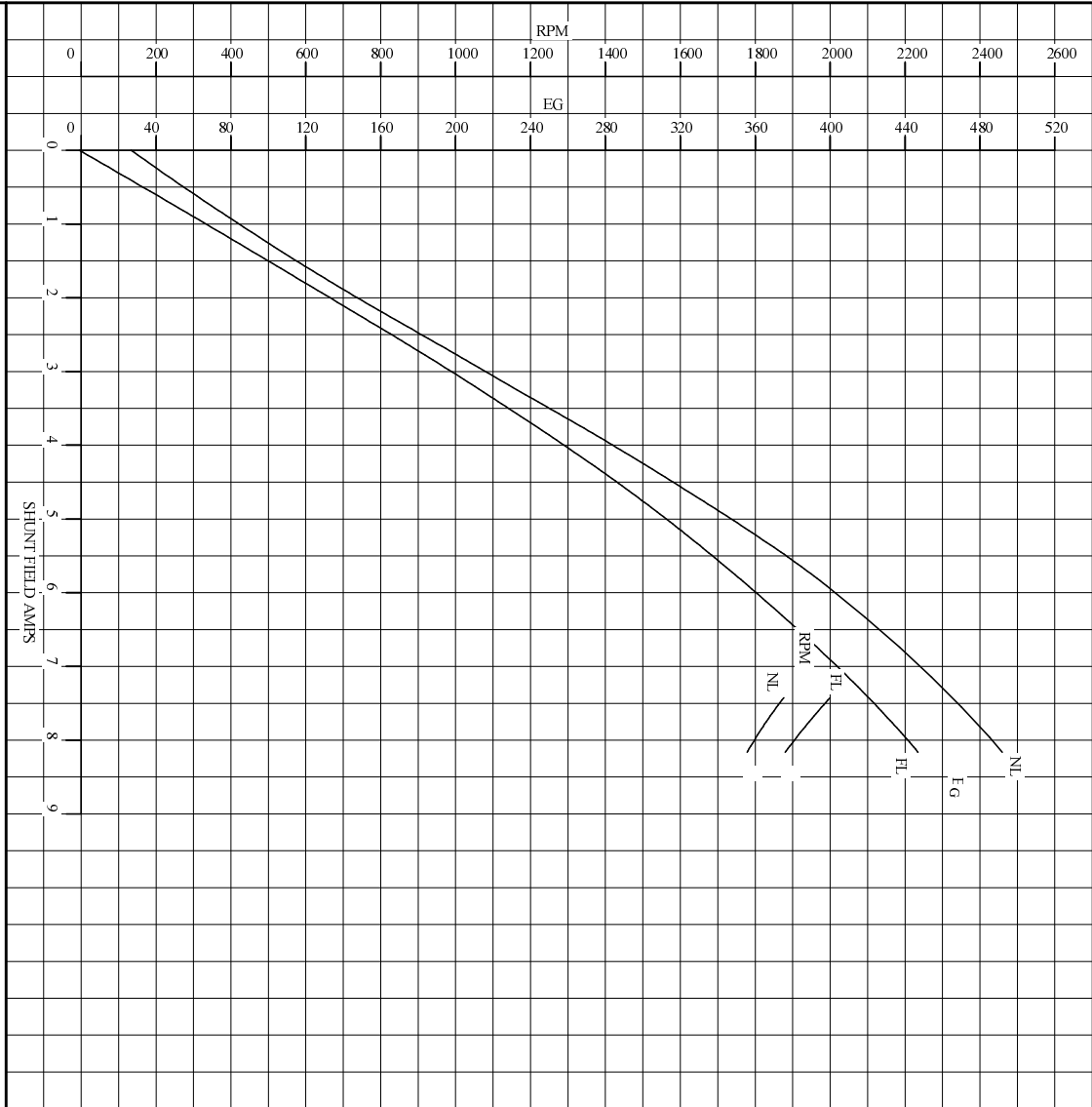
RELIANCE ELECTRIC
 CLEVELAND, OHIO 44117 U.S.A.

REC. BY: N.L. EVANS
 CK. BY: N. JESCHKE
 APP. BY: E. J. HINER
 DATE: 5-5-69

CONNECTION DIAGRAM
406770-6
 ORIGINAL AT RCC

C/R 244907, 290048, 354478, 354480

REF. S.O.	FRAME	RATING	BASE SPEED	WINDING TYPE
	MC4013AT	400HP	1750	STRAIGHT SHUNT
S.F. ENCL.	AMB°C/INSUL	DUTY	POWER CODE/FORM FACTOR	TYPE
1.0 DPFV	40/F	CONT	C	TR
COOLING AIR (CFM/IN H ₂ O) \bar{U} (sec)		\bar{R} (hoc)	T_m	BASIC RPM
1200/4.0		.386	.0410	1950
		T_h	MAX CONT RPM	WINDER RPM
		.0267	2000	MAX. SAFE
WINDING	VOLTS	CURRENT		TURNS PER COIL
		25°C	HOT	
ARM CIRCUIT	500	.0184	640	.823 MH
SERIES S1-S2	-	-	-	-
SHUNT F1-F2	300	25.1	36.8	15.6 H
			11.9	8.16
				500



REMARKS: TYPICAL DATA SPEED REGULATOR REQUIRED FOR STABILITY
CURVES VALID FOR NAMEPLATE SPEED RANGE ONLY

BALDOR • DOUGLASS • RELIANCE		DR. BY J. MARTIN	D-C
		CK. BY J. MARTIN	APPLICATION
		APP. BY E. HILLIOT	DATA
		DATE 07/12/90	ISSUE DATE 6/2/2005

C/R 3692/09


REL S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	MC4013AT	400HP	1750	500	640
WINDING TYPE	S.F.	ENCL.	AMB °C/INSUL	DUTY	FIELD VOLTS
STRAIGHT SHUNT	1.0	DPFV	40/F	CONT	300
POWER CODE	TYPE	WK 2 (LB-FT 2)	HOT ARM. CIR. RES.	FLD. AMPS@25 °C	HOT FIELD RES
C	TR	81.56	.0267	11.9	36.7

ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR (CFM/IN H 20)	TURNS PER COIL SHUNT/SERIES	TEST DATE
.823	15.6	1200/4.0	500/.00000	-

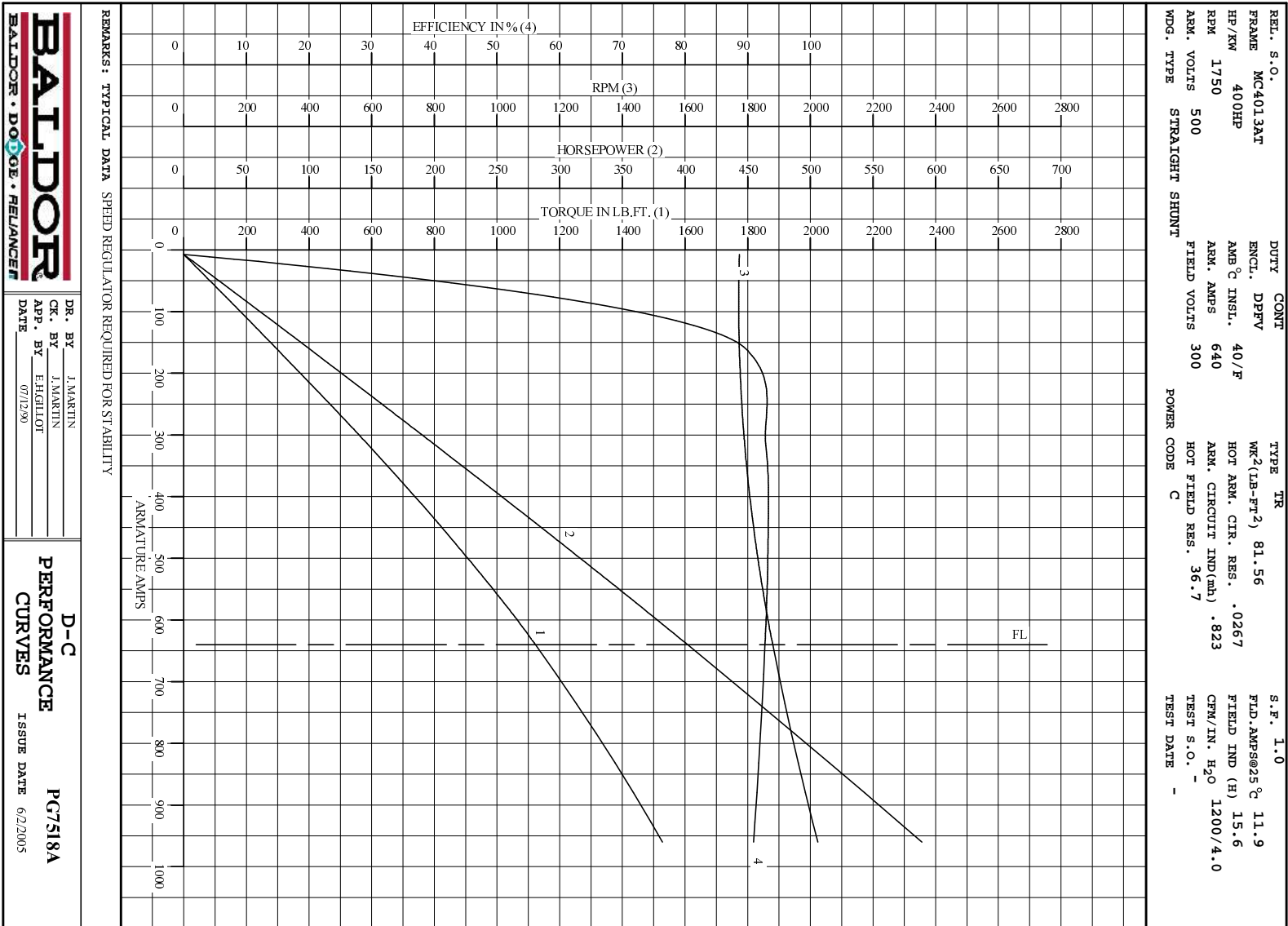
LOAD PERFORMANCE					
LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	% EFFICIENCY
NO LOAD	7.3	0	0	1774	0
1/4	160	296	100	1774	89.7
2/4	320	596	203	1791	92.9
3/4	480	874	304	1827	93.2
4/4	640	1123	402	1880	92.8
O.L.	960	1529	589	2024	90.9

RPM VS. FIELD AMPS			Eg VS. FIELD AMPS		
FIELD AMPS	RPM N.L.L.	RPM F.L.L.	Eg N.L.L. @ BASE SPEED	Eg F.L.L. @ BASE SPEED	
8.16	1773	1879	491	446	
7.97	1800	1907	486	440	
7.79	1823	1937	480	433	
7.60	1849	1967	473	427	
7.42	1876	2000	466	420	

REMARKS: TYPICAL DATA
 MAXIMUM SAFE SPEED = 3000 RPM
 SPEED REGULATOR REQUIRED FOR STABILITY

	DR. BY J. MARTIN	D-C MOTOR PERFORMANCE DATA DG7518A ISSUE DATE 6/2/2005
	CK. BY J. MARTIN APP. BY E.H.GILLOT DATE 07/12/90	

C/R 369209



BALDOR
BALDOR • DOUGLASS • RELIANCE

D-C
PERFORMANCE
CURVES

DR. BY J.MARTIN	PG7518A
CK. BY J.MARTIN	ISSUE DATE 6/2/2005
APP. BY E.HILLIOT	
DATE 07/12/90	

C/R 3692/09