

BALDOR® • RELIANCE

Product Information Packet

D51500R-BV

500HP, 1150RPM, DC, 4414ATZ, DPG-FV,

Copyright © All product information within this document is subject to Baldor Electric Company copyright © protection, unless otherwise noted.

Part Detail			
Type:	DC	Prod. Type:	TR
Power Code:	C	Weight:	4560
Frame Group:	C 4414ATZ	Mounting Pos.:	F2
HP:	500	Enclosure:	DPFV
RPM:	1150/1450	Wound:	STR. SHUNT
Service Factor:	1.0	Arm V:	500
Arm A:	805.00	Field V:	300
Field A:	12.35	Field A Hot:	9.33/5.63
Insulation Class:	F	Ambient:	40
Duty:	CONT	DE Bearing:	110BC02J30X
ODE Bearing:	95BC02J30X	Brushes:	419904-52BK
Brush Qty.:			

616492-001

**DIRECT CURRENT MOTORS AND GENERATORS
INDUSTRIAL-RPM III**

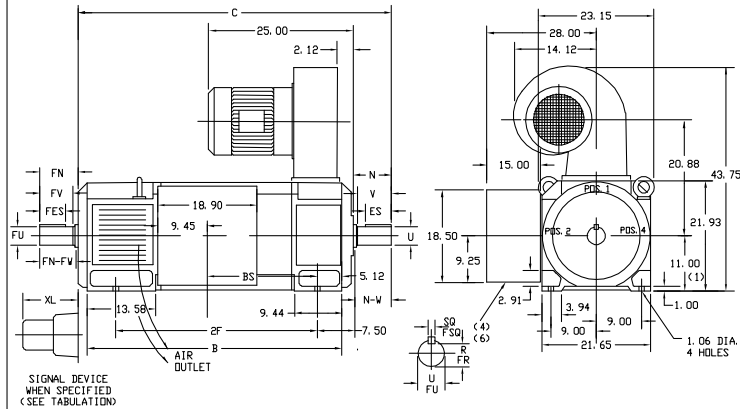
ENCLOSURE: DRIP PROOF FULLY GUARDED
SPLASHPROOF

MOUNTING: FOOT

COOLING: FORCE VENTILATED WITH
INTEGRAL BLOWER & MOTOR

ACCESSORIES: FLANGE MOUNTED
TACHOMETER

FRAME C4412ATZ - C4414ATZ



SIGNAL DEVICE
WHEN SPECIFIED
(SEE TABULATION)

DIMENSIONS ARE IN INCHES.

FRAME	DUTY	C	BS	B	2F	DRIVE END SHAFT AND KEY							(5) OPPOSITE DRIVE END SHAFT AND KEY							WT. (LBS)
						N	N-W	UX(2)	V	R(3)	SQ	ES	FN	FN-FW	FUK(2)	FV	FR(3)	FSQ	FES	
C4412ATZ	COUPLED	58.32	19.81	46.56	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	3245
UC4412ATZ	BELTED	59.32	19.81	46.56	36.00	8.62	8.25	4.125	8.00	3.563	1.000	6.50	7.62	7.25	3.625	7.00	3.134	.875	5.75	3275
C4413ATZ	COUPLED	62.25	23.75	50.56	40.00	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	3660
UC4413ATZ	BELTED	63.25	23.75	50.56	40.00	8.62	8.25	4.125	8.00	3.563	1.000	6.50	7.62	7.25	3.625	7.00	3.134	.875	5.75	3690
C4414ATZ	COUPLED	68.56	30.05	56.56	45.00	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	4280
UC4414ATZ	BELTED	69.56	30.05	56.56	45.00	8.62	8.25	4.125	8.00	3.563	1.000	6.50	7.62	7.25	3.625	7.00	3.134	.875	5.75	4310

SIGNAL DEVICE	XL	WT. (LBS.)
SPY	10.88	7
BC-42	13.38	25
BC-46	15.68	35
M-627A	10.50	14
M-628A	10.50	14
M-727A	10.50	14
M-737A	10.50	14
RD-11	10.00	17
RD-51	16.68	38
RD-61	10.00	17
H56	10.00	17
RE-045	2.56	5
RE-210	15.31	17
TG2168A	2.56	5
TS2014N	6.50	5
TS2087N	11.00	17
RD-120	1.88	5
RL67	2.00	5
HS35	3.00	5
M285	3.12	20
RPY444	11.00	15
N3 DR W4	3.62	10

- (1) THIS DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .06 INCH IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES.
- (2) 'U' AND 'FU' VARY +.000 - .001.
- (3) 'R' AND 'FR' VARY +.000 - .015.
- (4) REMOVABLE COVER PLATE FOR CUSTOMER DRILLING. TERMINAL BOX CAN BE POSITIONED FOR EITHER TOP OR BOTTOM CONDUIT ENTRY.
- (5) OPPOSITE DRIVE END SHAFT SUPPLIED ONLY WHEN SPECIFIED.
- (6) TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, W-1, W-4, W-5, W-7 OR C-1 MOUNTING IS SPECIFIED.
- (7) AIR FILTER SUPPLIED ONLY WHEN SPECIFIED. BLOWER ASSEMBLY CAN BE LOCATED AT POSITIONS 1, 2 OR 4.

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

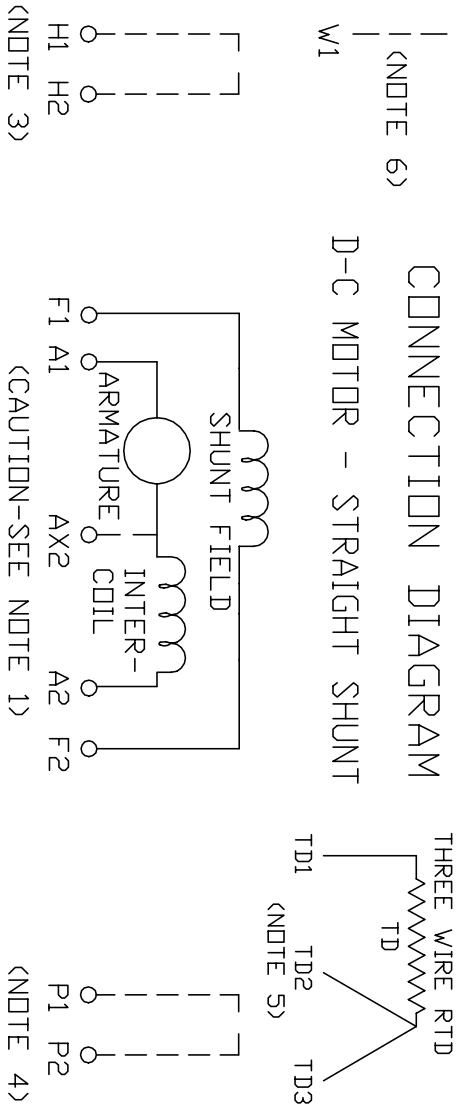
REV. DESC: LOADED TO BUS	VERSION: 00	TDR: 000000578087
REV. LTR: -	REVISED: 02:11:43 01/31/2011	BY: CONNAS
FILE: \RGG\00016\134		
MTL: -		

BALDOR

DIMENSION DRAWING, C4412ATZ - C4414ATZ, DPP, FOOT MTG, FRC VENT.

SH 1 of 1

616492-001



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. _____

<p style="font-size: small; margin: 0;">RELIANCE ELECTRIC CLEVELAND, OHIO 44117 U.S.A.</p>	<p style="font-size: x-small; margin: 0;">REV. BY N.L. EVANS CK. BY N. JESCHKE APP. BY E.J. HINER DATE 5-5-69</p>
<p style="font-size: x-large; margin: 0;">406770-6</p> <p style="font-size: small; margin: 0;">CONNECTION DIAGRAM</p>	<p style="font-size: small; margin: 0;">ORIGINAL AT RCC</p>

C/R 244907, 290048, 354478, 354480


REL S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	C4414ATZ	500HP	1150	500	805
WINDING TYPE		S.F.	ENCL.	AMB °C/INSUL	DUTY
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	178.5	.0275	14.7	28.5

ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR(CFM/IN H 20)	TURNS PER COIL SHUNT/SERIES	TEST DATE
1.19	20.5	1650/7.00	425/.00000	-

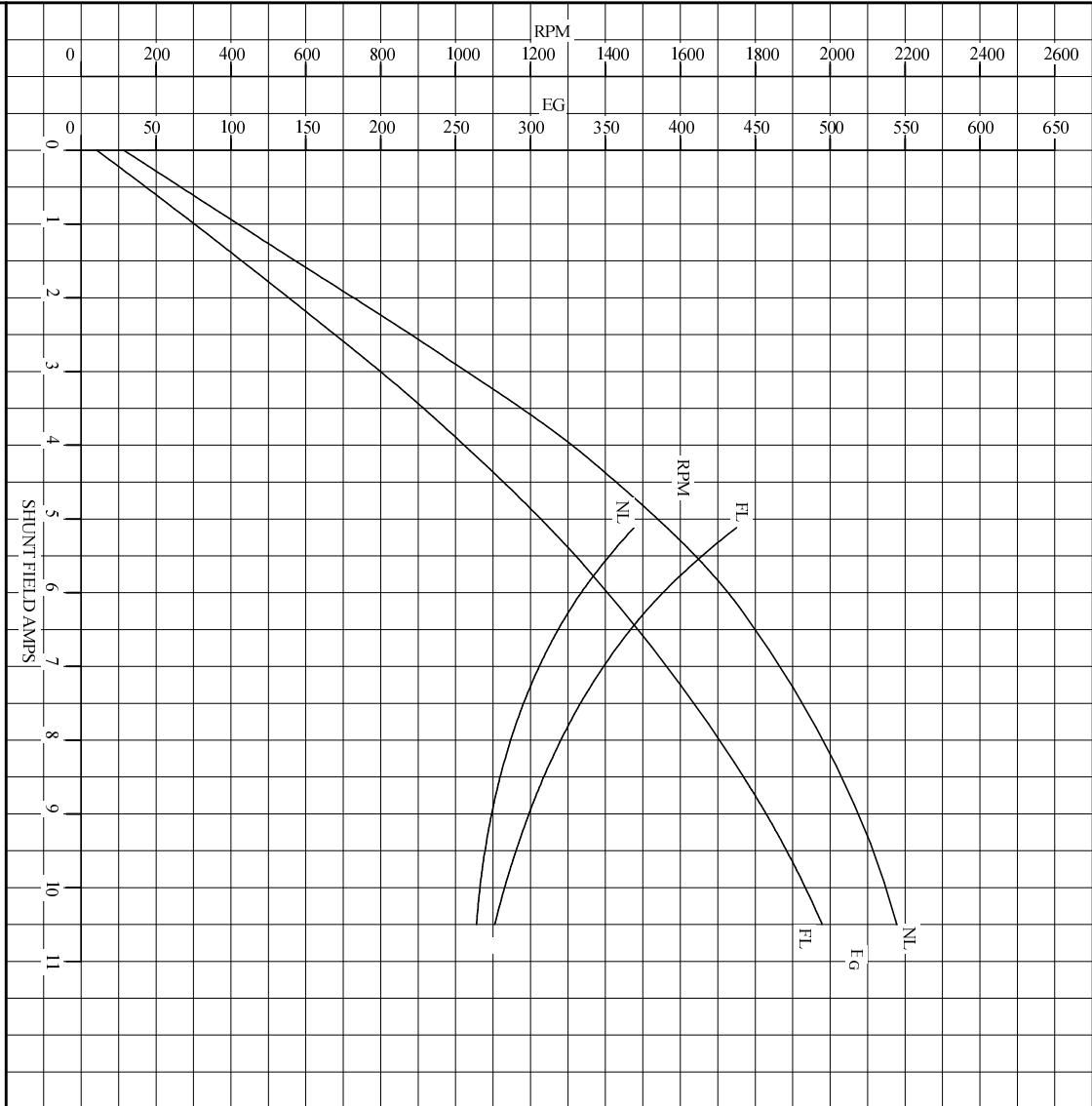
LOAD PERFORMANCE					
LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	% EFFICIENCY
NO LOAD	8.6	0	0	1054	0
1/4	201	629	126	1053	90.2
2/4	403	1268	255	1057	92.9
3/4	604	1854	380	1077	92.9
4/4	805	2389	502	1103	92.1
O.L.	1208	3189	731	1204	89.8

RPM VS. FIELD AMPS			Eg VS. FIELD AMPS		
FIELD AMPS	RPM N.L.	RPM F.L.	Eg N.L. @ BASE SPEED	Eg F.L. @ BASE SPEED	
10.4	1053	1102	544	494	
9.15	1089	1184	521	461	
7.80	1159	1300	490	420	
6.46	1278	1473	449	370	
5.11	1476	1750	391	312	

REMARKS: TYPICAL DATA
 MAXIMUM SAFE SPEED = 2450 RPM
 SPEED REGULATOR REQUIRED FOR STABILITY

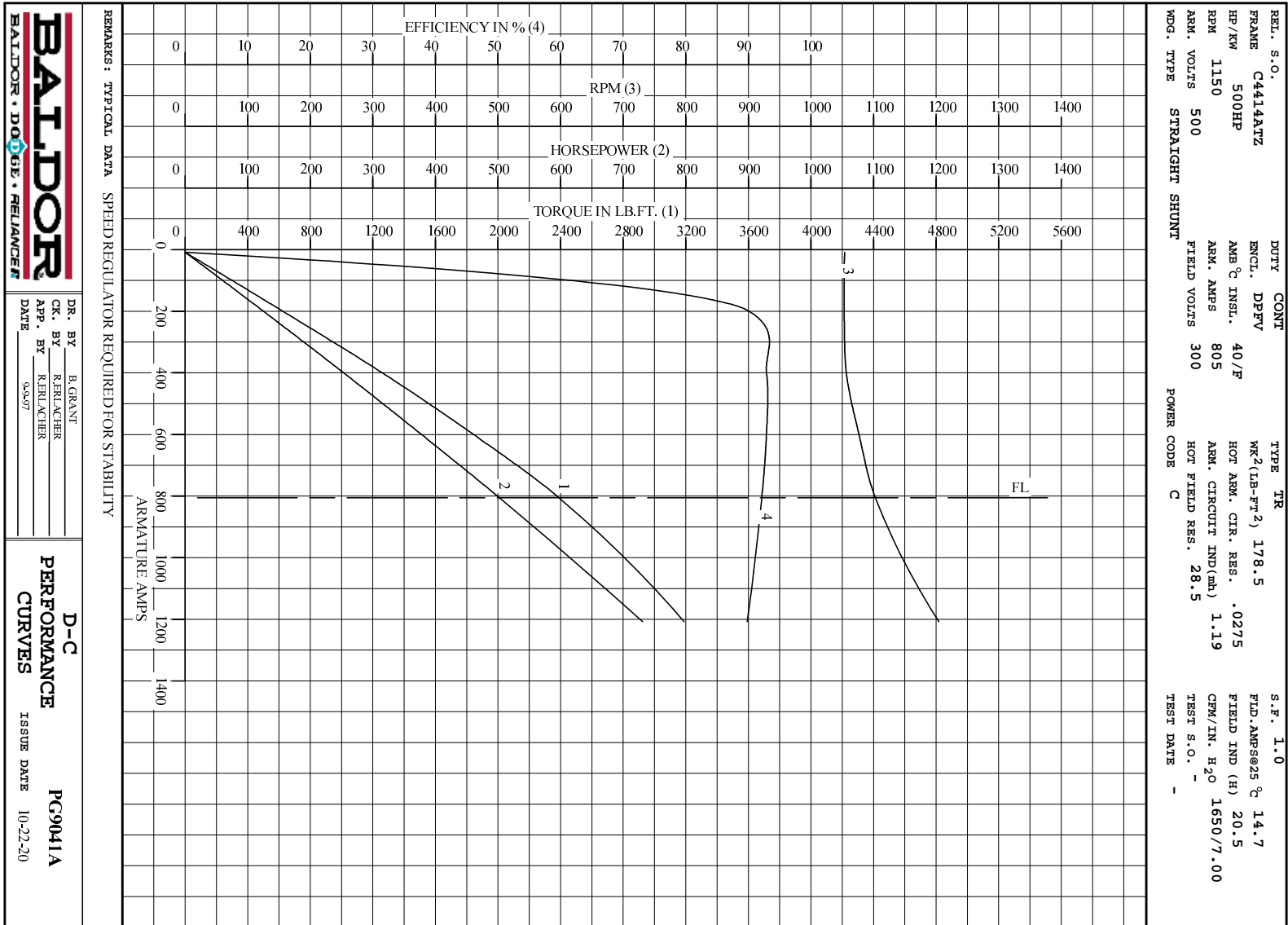
	DR. BY B. GRANT	D-C MOTOR PERFORMANCE DATA DG9041A ISSUE DATE 10-22-2008
	CK. BY R. BRÄNCHER APP. BY R. BRÄNCHER DATE 9-9-97	

REF. S.O.	FRAME	C4414ATZ	RATING	500HP	BASE SPEED	1150	WINDING TYPE	STRAIGHT SHUNT
S.F.	ENCL.	AMB°C/INSUL	DUTY	CONT	POWER CODE/FORM FACTOR	C	TYPE	TR
1.0	DPFV	40/F						178.5
COOLING AIR (CFM/IN H ² O)	R (sec)	R (hot)	T _e	T _m	BASIC RPM	MAX CONT RPM	WINDER RPM	MAX. SAFE
1650/7.00	.291	.0524	.0385	.0153	1380	1450	1750	2450
WINDING	VOLTS	RESISTANCE			CURRENT		INDUCTANCE	TURNS PER COIL
ARM CIRCUIT	500	25°C	HOT	25°C	HOT			
SERIES S1-S2	-	.0186	.0275	-	805	1.19	mH	-
SHUNT F1-F2	300	20.3	28.6	14.7	10.5	20.5	H	425



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

BALDOR BALDOR • DOUG • RELIANCE	DR. BY	B. GRANT	D-C APPLICATION DATA
	CK. BY	R. REINACHER	
	APP. BY	R. REINACHER	SC9041A
	DATE	9/29/97	
			ISSUE DATE 10-22-2008



DR. BY B. GRANT
 CK. BY R. REINACHER
 APP. BY R. REINACHER
 DATE 9/29/97

D-C
PERFORMANCE
CURVES ISSUE DATE 10-22-20
PG9041A