ottomotores

CUMMINS SERIE 6C

Energía que Mueve al Mundo

Definiciónes

Potencia Prime
Estos valores son aplicables para el suministro de energía eléctrica continua (a carga variable) en lugar de la red comercial + 10% sobrecarga

Potencia Stand by
Estos valores son aplicables para el suministro de energía eléctrica continua (con carga variable) en caso de falla de la red comercial. No se permite sobre-carga sobre estos valores.

Tabla de Potencias

Modelo	Voltaje	kVA Prime	kWe Prime	kVA Stand-by	kWe Stand-by
CNY150	220-440V	170	136	188	150
CNY175	220-440V	199	159	219	175
CNY200	220-440V	227	182	250	200

0.8 Factor de potencia

Información Técnica

Datos Técnicos	CNY150 / CNY175	CNY200
Frecuencia:	60 Hz	60 Hz
Marca / Modelo	6CTA8.3G2	6CTAA8.3G3
Generador Modelo:	Stamford UCI274F	Stamford UCI274H
Número de Cilindros:	6 en linea	6 en linea
Diametro por Carrera :in (mm)	4.49X5.32 (114X135)	4.49X5.32 (114X135)
Relación de Compresión:	16.8 : 1	16.8 : 1
Aspiración:	Turbo y Postenfriado	Turbo y cambio c/aire
Velocidad:	1800 RPM	1800 RPM
Potencia: BHP(kWm)	277 (207)	317 (237)
Presion Efectiva: psi (kPA)	242 (1669)	276 (1905)
Velocidad dePiston: ft/min (m/s)	1596 (8.1)	1596 (8.1)
Consumo a plena carga: lt / hr - 100%	45	64
Calor Expulsado en el Sistema de Escape: BTU/min (kWm)	10220 (180)	13142 (231)
Calor Expulsado en el Sistema de Enfriamiento: BTU/min (kWm)	6630 (117)	2916 (51)
Temperatura de Escape: ºF (ºC)	1055 (569)	1056 (569)
Flujo de Enfriamiento en el Radiador m³/seg - FPM	llame a fabrica	llame a fabrica
Flujo de Escape: cfm	1515 (715)	1819 (858)

Nota: Imagen de carácter ilustrativa ya que los equipos en foto pudieran incluir accesorios opcionales

Como leer nuestro codigo: Ejem: **CNY150**

C=Motor Cummins
N=Generador Newage Stamford
Y=60Hz-1800 RPM
150= Potencia del Equipo.

Ottomotores, S.A de C.V.
Calz. San Lorenzo No.1150
Col. Cerro de la estrella, C.P. 09860
Delg. Iztapalapa México, D.F.
Tels:52-55-5624-5600
Fax: 52-55-5426-5521 / 52-55-5426-5581
email: **ventas@ottomotores.com.mx**
sitio web: **www.ottomotores.com.mx**

Dimensiones

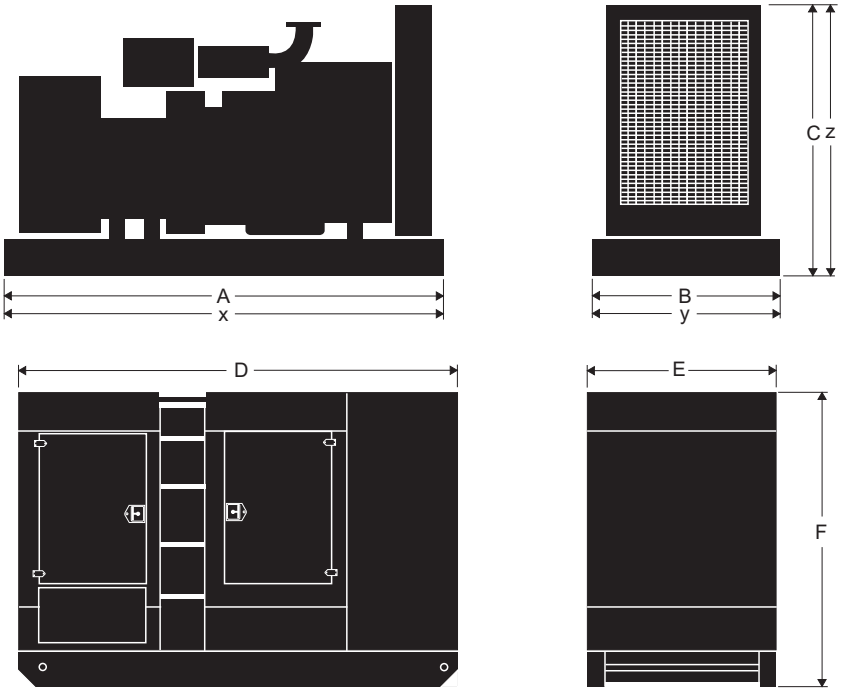


Tabla de Dimensiones

CNY150	Equipo con Base Estructural			Equipo con Base Tanque			Equipo con Caseta Acústica*		
	A	B	C	x	y	z	D	E	F
	235,00	91,00	123,00	260,00	109,00	170,00	326,00	109,00	192,00
	Peso: 1357,00 kgs			Peso: 1780,00 kgs					

CNY175	Equipo con Base Estructural			Equipo con Base Tanque			Equipo con Caseta Acústica*		
	A	B	C	x	y	z	D	E	F
	235,00	91,00	149,00	260,00	109,00	170,00	326,00	109,00	192,00
	Peso: 1407,00 kgs			Peso: 1796,00 kgs					

CNY200	Equipo con Base Estructural			Equipo con Base Tanque			Equipo con Caseta Acústica*		
	A	B	C	x	y	z	D	E	F
	260,00	120,00	160,00	280,00	145,00	179,50	343,00	145,00	190,00
	Peso: 1642,00 kgs			Peso: 2035,00 kgs					

[*] Equipo opcional

Información Técnica

Nota: las condiciones de referencia estándar son de 25 ºC (77 º F) temperatura de entrada de aire. Todos los datos de desempeño de motores son basados en la potencia mencionada arriba.

Datos de consumo de combustible a plena carga con combustible diesel tienen una gravedad específica de 0,85.

.

Comercializado por:

Módulos de Control

Ottomotores tiene una posición única en la fabricación de grupos electrógenos utilizando en ellos módulos de control que cumplen con todos los niveles de requerimiento del mercado nacional y de exportación.

Las diferentes soluciones de controles que se tienen para nuestra gama de plantas generadoras, permite una operación simple en modo manual y automático, asi mismo permiten desarrollar proyectos de sincronía entre plantas generadoras o con la red de energía eléctrica.

La familia de módulos de control en transición abierta (DALE 3200) permite tener control en forma automática de la unidad de transferencia, asi como elmonitoreo del grupo generador.

Nuestro modulos de control cuentan con puerto de comunicación RS485 para la comunicación remota con el grupo generador.

Los módulos pueden ser monitoreados através de un exelente software para observar parámetros del equipo de manera facíl y rapida.

La familia de módulos de control para la sincronía (6100, 6050 y 6300),incorporan un amplio sistema de monitoreos ademas de conexion a Internet (LAN) o mensaje SMS via celular, o usando los puertos de comunicación RS485 a través de ModBus

ottomotores

Energía que Mueve al Mundo

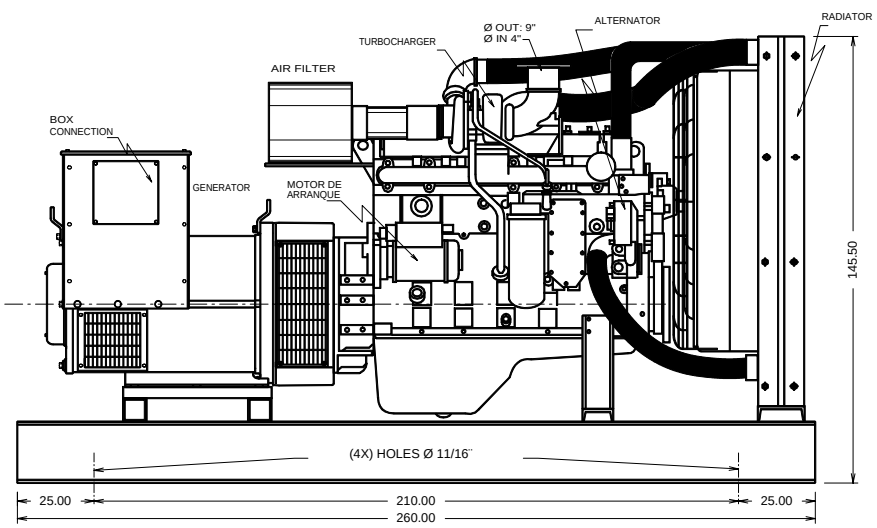
Calz. San Lorenzo No.1150
Col. Cerro de la Estrella, C.P.09860
Delegación Iztapalapa México D.F.
Tels: 52-55-5624-5600
Fax.52-55-5426-55-21 / 52-55-54265581

E-mail **ventas1@ottomotores.com.mx**
ventas2@ottomotores.com.mx

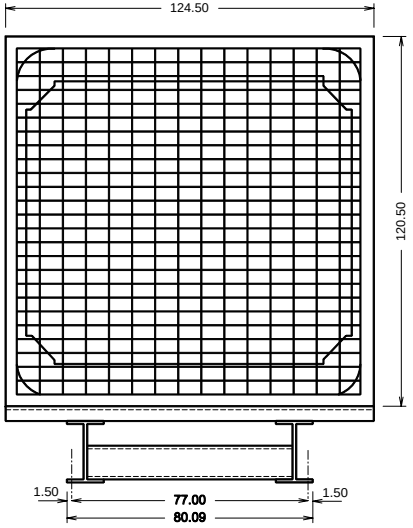
Web site. **www.ottomotores.com.mx**

MODELS
CNE220
CNY200

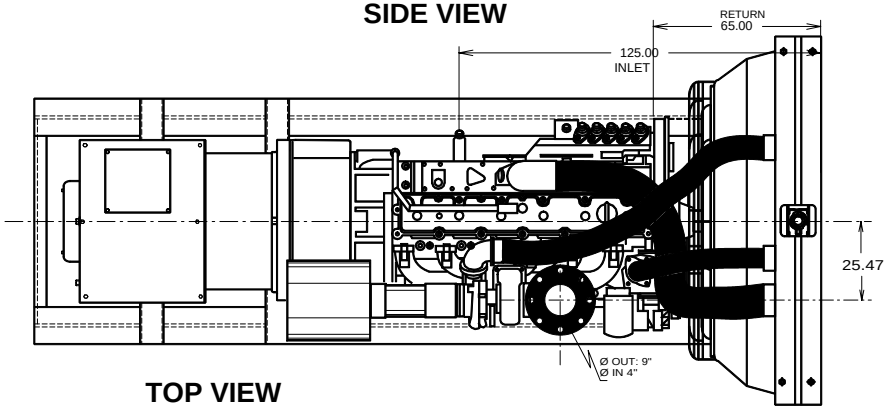
DESCRIPTION	
RADIATOR:	OT-8
ENGINE:	6CTAA8.3G3
AIR FILTER:	AH1196
BASE FRAME:	BP-6CTAA-STF
# SPRING AVMS :	4 PZS.



SIDE VIEW



FRONT VIEW



TOP VIEW

NOTES:

-THE GENSET DIMENSIONS ARE THE SAME BY FAMILY MODEL, THERE COULD BE ONLY DIFFERENCES ON THE ALTERNATOR LENGHT SEE SPECIFIC GENERAL ARRAGEMENT DRAWING OF CERTEIN MODEL

-TOTAL WEIGHT COULD VARY CHECK RATING CHART FOR EACH MODEL

Customer: S/O:

Rev.	Description	Date	Certificated
	Reviews		

Title: ***CUMMINS ENGINE 6CTAA8.G3 - STAMFORD ALTERNATOR***

Draw: R.G.C.	Revised: F.H.M.	Certificated: F.H.M.	Code: **CNE/Y-07**
Date: JAN 05th 2005	Date: JAN 05th 2005	Date: JAN 05th 2005	Dept.: Engineering

Marks: cms | Scale: s/e | Draw: | Of:

Cummins	Cummins Inc. Columbus, Indiana 47201 **Engine Data Sheet**	Basic Engine Model: **6CTAA8.3-G3**	Curve Number: **FR-90940**	*G-DRIVE* **C8.3** **1**
		Engine Critical Parts List: **CPL: 8000**	Date: **30Mar04**	

Displacement : **8.3**litre (**505** in^3)	Bore : **114** mm (**4.49** in.) Stroke : **135** mm (**5.32** in.)
No. of Cylinders : **6**	Aspiration : **Turbocharged and Charge Air Cooled**

•• PRELIMINARY ••

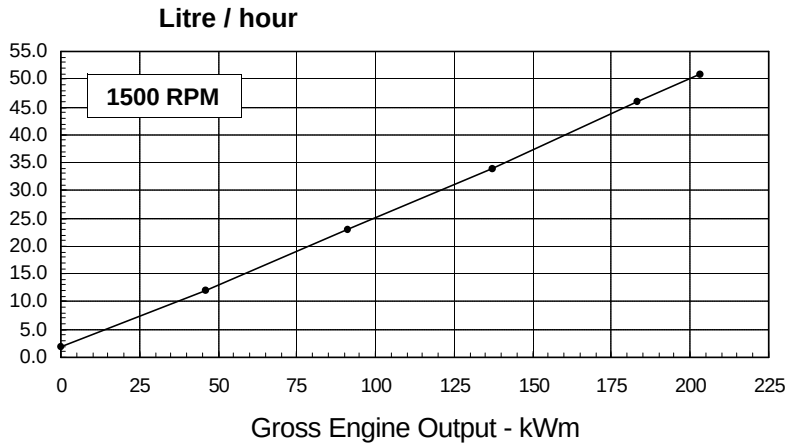
Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kWm	BHP	kWm	BHP	kWm	BHP
1500	203	272	183	245	149	200
1800	237	317	213	285	175	235

Emissions Certification (1800 RPM Only)

This engine complies with certain emissions requirements established by US EPA/CARB.
See Exhaust Emissions Data Sheet for conformance specifics.

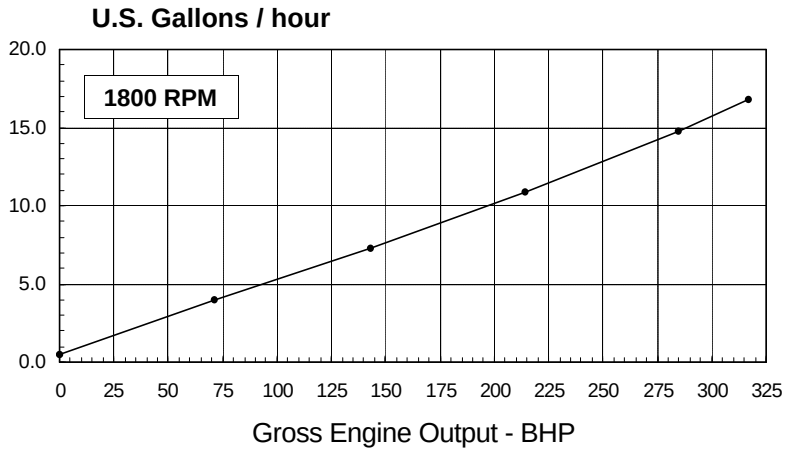
Engine Performance Data @ 1500 RPM

OUTPUT POWER			FUEL CONSUMPTION			
%	kWm	BHP	kg/ kWm·h	lb/ BHP·h	litre/ hour	U.S. Gal/ hour
STANDBY POWER						
100	203	272	0.209	0.344	51	13.5
PRIME POWER						
100	183	245	0.207	0.340	46	12
75	137	184	0.205	0.338	34	9.0
50	91	123	0.206	0.340	23	6.0
25	46	61	0.226	0.371	12	3.3
CONTINUOUS POWER						
100	149	200	0.206	0.340	36	9.6



Engine Performance Data @ 1800 RPM

OUTPUT POWER			FUEL CONSUMPTION			
%	kWm	BHP	kg/ kWm·h	lb/ BHP·h	litre/ hour	U.S. Gal/ hour
STANDBY POWER						
100	237	317	0.223	0.366	64	16.8
PRIME POWER						
100	213	285	0.218	0.358	56	14.8
75	160	214	0.211	0.348	41	10.9
50	106	143	0.214	0.352	28	7.3
25	53	71	0.234	0.385	15	4.0
CONTINUOUS POWER						
100	175	235	0.213	0.351	44	11.6



CONVERSIONS: (Litres = U.S. Gal x 3.785) (kWm = BHP x 0.746) (U.S. Gal = Litres x 0.2642) (BHP = kWm x 1.34)

Data shown above represent gross engine performance capabilities obtained and corrected in accordance with ISO-3046 conditions of 100 kPa (29.53 in Hg) barometric pressure [110 m (361 ft) altitude], 25 °C (77 °F) air inlet temperature, and relative humidity of 30% with No. 2 diesel or a fuel corresponding to ASTM D2.

See reverse side for application rating guidelines.

The fuel consumption data is based on No. 2 diesel fuel weight at 0.85 kg/litre (7.1 lbs/U.S. gal).

Power output curves are based on the engine operating with fuel system, water pump and lubricating oil pump; not included are battery charging alternator, fan, optional equipment and driven components.

TECHNICAL DATA DEPT. **CERTIFIED WITHIN 5%** **CHIEF ENGINEER**

POWER RATING APPLICATION GUIDELINES FOR GENERATOR DRIVE ENGINES

These guidelines have been formulated to ensure proper application of generator drive engines in A.C. generator set installations. Generator drive engines are not designed for and shall not be used in variable speed D.C. generator set applications.

STANDBY POWER RATING is applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. Under no condition is an engine allowed to operate in parallel with the public utility at the Standby Power rating.

This rating should be applied where reliable utility power is available. A standby rated engine should be sized for a maximum of an 80% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the Standby Power rating. Standby ratings should never be applied except in true emergency power outages. Negotiated power outages contracted with a utility company are not considered an emergency.

CONTINUOUS POWER RATING is applicable for supplying utility power at a constant 100% load for an unlimited number of hours per year. No overload capability is available for this rating.

PRIME POWER RATING is applicable for supplying electric power in lieu of commercially purchased power. Prime Power applications must be in the form of one of the following two categories:

UNLIMITED TIME RUNNING PRIME POWER

Prime Power is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of the Prime Power rating during any operating period of 250 hours.

The total operating time at 100% Prime Power shall not exceed 500 hours per year.

A 10% overload capability is available for a period of 1 hour within a 12 hour period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year.

LIMITED TIME RUNNING PRIME POWER

Prime Power is available for a limited number of hours in a non-variable load application. It is intended for use in situations where power outages are contracted, such as in utility power curtailment. Engines Jun be operated in parallel to the public utility up to 750 hours per year at power levels never to exceed the Prime Power rating. The customer should be aware, however, that the life of any engine will be reduced by this constant high load operation. Any operation exceeding 750 hours per year at the Prime Power rating should use the Continuous Power rating.

Operation At Elevated Temperature And Altitude:

For installations with a cooling system meeting the requirements on this data sheet, the engine Jun be operated at:

1800 RPM up to 3280 ft (1000 m) and 104 °F (40 °C) ambient without power deration. For sustained operation above these conditions, derate by 4% per 1000 ft (300 m) and 3.3% per 10 °F (6% per 10 °C).

1500 RPM up to 3280 ft (1000 m) and 95 °F (35 °C) ambient without power deration. For sustained operation above these conditions, derate by 4% per 1000 ft (300 m) and 8.3% per 10 °F (15% per 10 °C).

Cummins Inc.
Engine Data Sheet

ENGINE MODEL : **6CTAA8.3-G3** **CONFIGURATION NUMBER :** D413035GX02

DATA SHEET : DS-90940
DATE : 30Mar04
PERFORMANCE CURVE : FR-90940

INSTALLATION DIAGRAM
• Fan to Flywheel : 3170244

CPL NUMBER
• Engine Critical Parts List : 8000

GENERAL ENGINE DATA

Type	4-Cycle; In-line; 6-Cylinder Diesel	
Aspiration	Turbocharged and Charge Air Cooled	
Bore x Stroke — in x in (mm x mm)	4.49 x 5.32 (114 x 135)	
Displacement — in^3 (litre)	505 (8.3)	
Compression Ratio	16.8 : 1	
Dry Weight		
Fan to Flywheel Engine — lb (kg)	1505	(684)
Wet Weight		
Fan to Flywheel Engine — lb (kg)	1572	(715)
Moment of Inertia of Rotating Components		
• with FW 9023 Flywheel — $lb_m \cdot ft^2$ ($kg \cdot m^2$)	37.6	(1.58)
• with FW 9061 Flywheel — $lb_m \cdot ft^2$ ($kg \cdot m^2$)	50.2	(2.12)
Center of Gravity from Rear Face of Flywheel Housing — in (mm)	21.3	(541)
Center of Gravity Above Crankshaft Centerline — in (mm)	6.4	(163)
Maximum Static Loading at Rear Main Bearing — lb (kg)	N.A.	N.A.

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Block — lb • ft (N • m)	1000	(1356)

EXHAUST SYSTEM

Maximum Back Pressure — in Hg (mm Hg)	3	(75)

AIR INDUCTION SYSTEM

Maximum Intake Air Restriction		
• with Dirty Filter Element — in H_2O (mm H_2O)	25	(635)
• with Normal Duty Air Cleaner and Clean Filter Element — in H_2O (mm H_2O)	10	(254)
• with Heavy Duty Air Cleaner and Clean Filter Element — in H_2O (mm H_2O)	15	(381)

COOLING SYSTEM

Coolant Capacity — Engine Only — US gal (litre)	3.25	(12.3)
Maximum Coolant Friction Head External to Engine — 1800 rpm — psi (kPa)	5	(35)
— 1500 rpm — psi (kPa)	4	(28)
Maximum Static Head of Coolant Above Engine Crank Centerline — ft (m)	60	(18.3)
Standard Thermostat (Modulating) Range — °F (°C)	180 - 203	(82 - 95)
Minimum Pressure Cap — psi (kPa)	10	(69)
Maximum Top Tank Temperature for Standby / Prime Power — °F (°C)	220 / 212	(104 / 100)
Minimum Raw Water Flow @ 90°F to HX —— Heat Exchanger — US gpm (litre / min)		N/A
Maximum Raw Water Inlet Pressure at HX —— Heat Exchanger — psi (kPa)		N/A

LUBRICATION SYSTEM

Oil Pressure @ Idle Speed — psi (kPa)	15	(103)
@ Governed Speed — psi (kPa)	40 - 60	(276 - 414)
Maximum Oil Temperature — °F (°C)	250	(121)
Oil Capacity with OP 9012 Oil Pan : High - Low — US gal (litre)	5 - 4	(18.9 - 15.1)
Total System Capacity (Including Combo Filter) — US gal (litre)	6.3	(23.8)
Angularity of OP 9012 Oil Pan — Front Down		45°
— Front Up		45°
— Side to Side		45°

G-DRIVE
C8.3
4

FUEL SYSTEM

Type Injection System		Bosch P7100 Inline	
Maximum Restriction at Lift Pump	— in Hg (mm Hg)	4	(102)
Maximum Allowable Head on Injector Return Line (Consisting of Friction Head and Static Head)	— in Hg (mm Hg)	10	(254)
Maximum Fuel Flow to Injection Pump	— US gph (litre / hr)	55	(208)

ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty, Positive Engagement)	— volt	12	24
Battery Charging System, Negative Ground	— ampere	63	40
Maximum Allowable Resistance of Cranking Circuit	— ohm	0.00075	0.002
Minimum Recommended Battery Capacity [Cold Soak @ 10 °F (-12 °C) and Above]	— 0°F CCA	950	475

COLD START CAPABILITY

Minimum Ambient Temperature for Aided (with Coolant Heater) Cold Start within 10 seconds	— °F (°C)	TBD	TBD
Minimum Ambient Temperature for Unaided Cold Start	— °F (°C)	32	(0)

PERFORMANCE DATA

All data is based on:

- Engine operating with fuel system, water pump, lubricating oil pump, air cleaner and exhaust silencer; not included are battery charging alternator, fan, and optional driven components.
- Engine operating with fuel corresponding to grade No. 2-D per ASTM D975.
- ISO 3046, Part 1, Standard Reference Conditions of:

Barometric Pressure	: 100 kPa (29.53 in Hg)	Air Temperature	: 25 °C (77 °F)
Altitude	: 110 m (361 ft)	Relative Humidity	: 30%

Steady State Stability Band at Any Constant Load	— %	+/- 0.50	
Maximum Temperature Rise Between Engine Air Inlet & Intake Manifold	— °F (°C)	45	(25)
Maximum Air Pressure Drop from Turbo Air Outlet to Intake Manifold — @1500 RPM	— in Hg (mm Hg)	2.5	(63.5)
— @1800 RPM	— in Hg (mm Hg)	4	(102)

		STANDBY				PRIME POWER			
		60 hz		*50 hz*		*60 hz*		*50 hz*	
Governed Engine Speed	— rpm	1800		1500		1800		1500	
Engine Idle Speed	— rpm	700 - 900		700 - 900		700 - 900		700 - 900	
Gross Engine Power Output	— BHP (kW_m)	317	(237)	272	(203)	285	(213)	245	(183)
Brake Mean Effective Pressure	— psi (kPa)	276	(1905)	283	(1950)	249	(1717)	255	(1758)
Piston Speed	— ft / min (m / s)	1596	(8.1)	1330	(6.8)	1596	(8.1)	1330	(6.8)
Friction Horsepower	— HP (kW_m)	30	(22)	23	(17)	30	(22)	23	(17)
Engine Water Flow at Stated Friction Head External to Engine:									
• 1 psi Friction Head	— US gpm (litre / s)	64	(4.0)	53	(3.3)	64	(4.0)	53	(3.3)
• Maximum Friction Head	— US gpm (litre / s)	55	(3.5)	45	(2.8)	55	(3.5)	45	(2.8)
Engine Data with Dry Type Exhaust Manifold									
Intake Air Flow	— cfm (litre / s)	679	(320)	530	(250)	657	(309)	492	(232)
Exhaust Gas Temperature	— °F (°C)	1056	(569)	1018	(548)	952	(511)	971	(522)
Exhaust Gas Flow	— cfm (litre / s)	1819	(858)	1388	(655)	1632	(770)	1247	(588)
Air to Fuel Ratio	— air : fuel	26.4 : 1		24.2 : 1		27.3 : 1		25.2 : 1	
Radiated Heat to Ambient	— BTU / min (kW_m)	1651	(29)	1576	(28)	1470	(26)	1497	(26)
Heat Rejection to Coolant	— BTU / min (kW_m)	4379	(77)	3486	(61)	3854	(68)	3184	(56)
Heat Rejection to Exhaust	— BTU / min (kW_m)	13142	(231)	9812	(172)	11109	(195)	8600	(151)
Heat Rejected to Aftercooler	— BTU / min (kW_m)	2916	(51)	2126	(37)	2658	(47)	1807	(32)
Charge Air Flow	— lb / min (kg / min)	48	(21)	37	(17)	46	(21)	35	(16)
Turbocharger Compressor Outlet Pressure	— in Hg (mm Hg)	61.7	(1566)	46	(1168)	53.2	(1350)	39.2	(996)
Turbocharger Compressor Outlet Temperature	— °F (°C)	358	(181)	312	(156)	327	(164)	286	(141)

N.A. - Data is Not Available
N/A - Not Applicable to this Engine
TBD - To Be Determined

•• PRELIMINARY ••

ENGINE MODEL : **6CTAA8.3-G3**
DATA SHEET : DS-90940
DATE : 30Mar04
CURVE NO. : FR-90940

FRAME UC274H
WINDING 311

RATINGS	REFER TO RATINGS BOOK
OVERLOAD	REFER TO RATINGS BOOK
ALTITUDE	REFER TO RATINGS BOOK
AMBIENT TEMP.	REFER TO RATINGS BOOK

CONTROL SYSTEM SER. 3	SEPARATELY EXCITED BY P.M.G.		
A.V.R.	MX341	MX321	
VOLTAGE REGULATION	± 1.0 %	± 0.5%	WITH 4% ENGINE GOVERNING
SUSTAINED SHORT CIRCUIT	REFER TO SHORT CIRCUIT DECREMENT CURVES OF THIS SECTION		

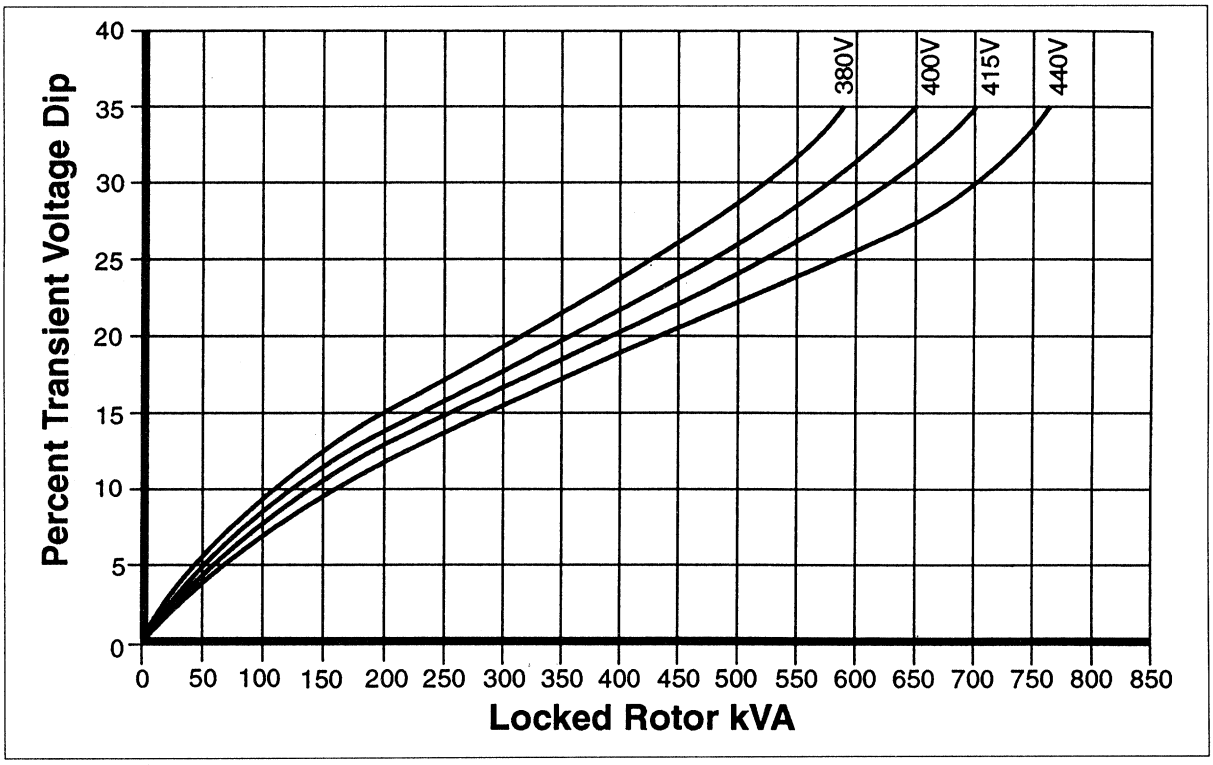
CONTROL SYSTEM SER. 4	SELF EXCITED			
A.V.R.	SX460	SX440	SX421	
VOLTAGE REGULATION	± 1.5%	± 1.0%	± 0.5%	WITH 4% ENGINE GOVERNING
SUSTAINED SHORT CIRCUIT	SERIES 4 CONTROL DOES NOT SUSTAIN A SHORT CIRCUIT CURRENT			

INSULATION SYSTEM	CLASS H	
PROTECTION	IP22 STANDARD - IP23 OPTIONAL (5% DERATE)	
RATED POWER FACTOR	0.8	
STATOR WINDING	DOUBLE LAYER CONCENTRIC	
WINDING PITCH	TWO THIRDS	
WINDING LEADS	12	
STATOR WDG. RESISTANCE	0.015 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED	
ROTOR WDG. RESISTANCE	1.92 Ohms at 22°C	
R.F.I. SUPPRESSION	B.S. 800 VDE 0875G VDE 0875N For other standards apply to the factory	
WAVEFORM DISTORTION	NO LOAD < 1.8% NON-DISTORTING BALANCED LINEAR LOAD < 5.0%	
MAXIMUM OVERSPEED	2250 Rev/Min	
BEARING DRIVE END	BALL. 6315 - 2RS. (ISO)	
BEARING NON-DRIVE END	BALL. 6310 - 2RS. (ISO)	
EFFICIENCY	REFER TO EFFICIENCY CURVES OF THIS SECTION	
	1 BEARING	2 BEARING
WEIGHT COMP. GENERATOR	629 kg	643 kg
WEIGHT WOUND STATOR	253 kg	253 kg
WEIGHT WOUND ROTOR	230.22 kg	218.75 kg
WR^2 INERTIA	1.9914 kgm^2	1.9377 kgm^2

	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF< 2%				TIF< 50			
COOLING AIR	0.514 m^3/sec 1090 cfm				0.617 m^3/sec 1308 cfm			
VOLTAGE SERIES STAR (Y)	380	400	415	440	416	440	460	480
VOLTAGE PARALLEL STAR (Y)	190	200	208	220	208	220	230	240
VOLTAGE EDISON DELTA (Δ)	220	230	240	250	240	254	266	277
kVA BASE RATING FOR REACTANCE VALUES	200	200	200	190	237.5	245	245	255
Xd DIR. AXIS SYNCHRONOUS	2.10	1.90	1.77	1.49	2.50	2.28	2.09	2.01
X'd DIR. AXIS TRANSIENT	0.18	0.16	0.15	0.12	0.21	0.19	0.17	0.16
X"d DIR. AXIS SUBTRANSIENT	0.12	0.11	0.10	0.09	0.14	0.13	0.12	0.11
Xq QUAD. AXIS REACTANCE	1.27	1.16	1.07	0.91	1.53	1.40	1.29	1.23
X"q QUAD. AXIS SUBTRANSIENT	0.16	0.15	0.14	0.11	0.20	0.18	0.17	0.16
XL LEAKAGE REACTANCE	0.08	0.08	0.07	0.06	0.10	0.09	0.08	0.08
X_2 NEGATIVE SEQUENCE	0.13	0.12	0.11	0.09	0.16	0.15	0.13	0.13
X_0 ZERO SEQUENCE	0.08	0.08	0.07	0.06	0.10	0.09	0.08	0.08
REACTANCES ARE SATURATED	VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED							
T'd TRANSIENT TIME CONST.	0.042 sec							
T"d SUB-TRANSTIME CONST.	0.012 sec							
T'do O.C. FIELD TIME CONST.	1.100 sec							
Ta ARMATURE TIME CONST.	0.012 sec							
SHORT CIRCUIT RATIO	1/xd							

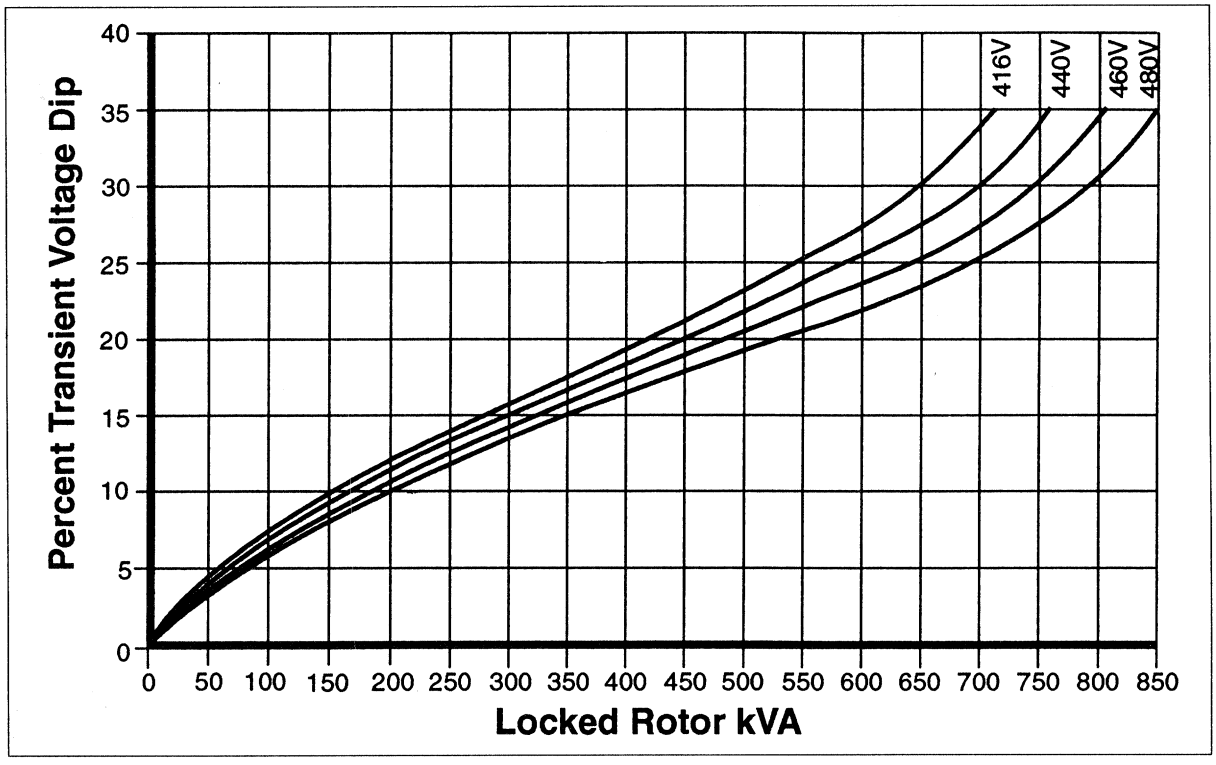
FRAME UC274H 50 HZ

SERIES 3 WINDING 311
LOCKED ROTOR MOTOR STARTING CURVE



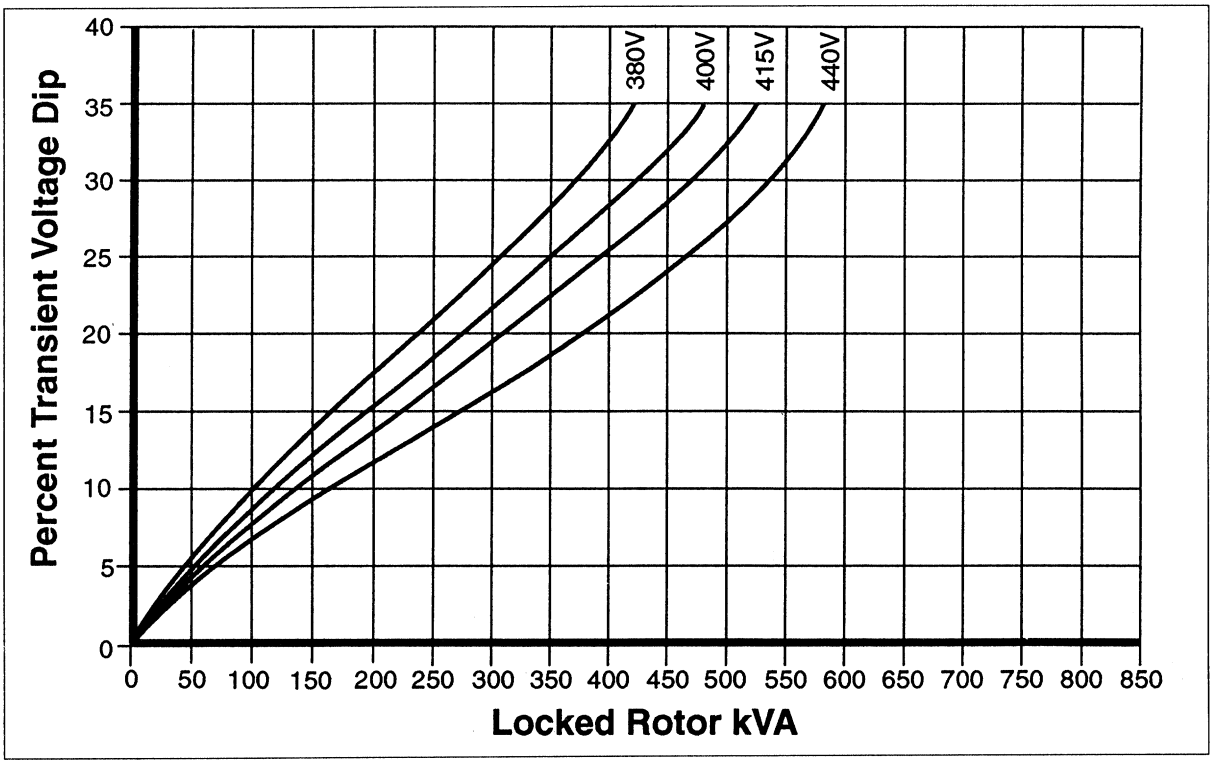
FRAME UC274H 60 HZ

SERIES 3 WINDING 311
LOCKED ROTOR MOTOR STARTING CURVE



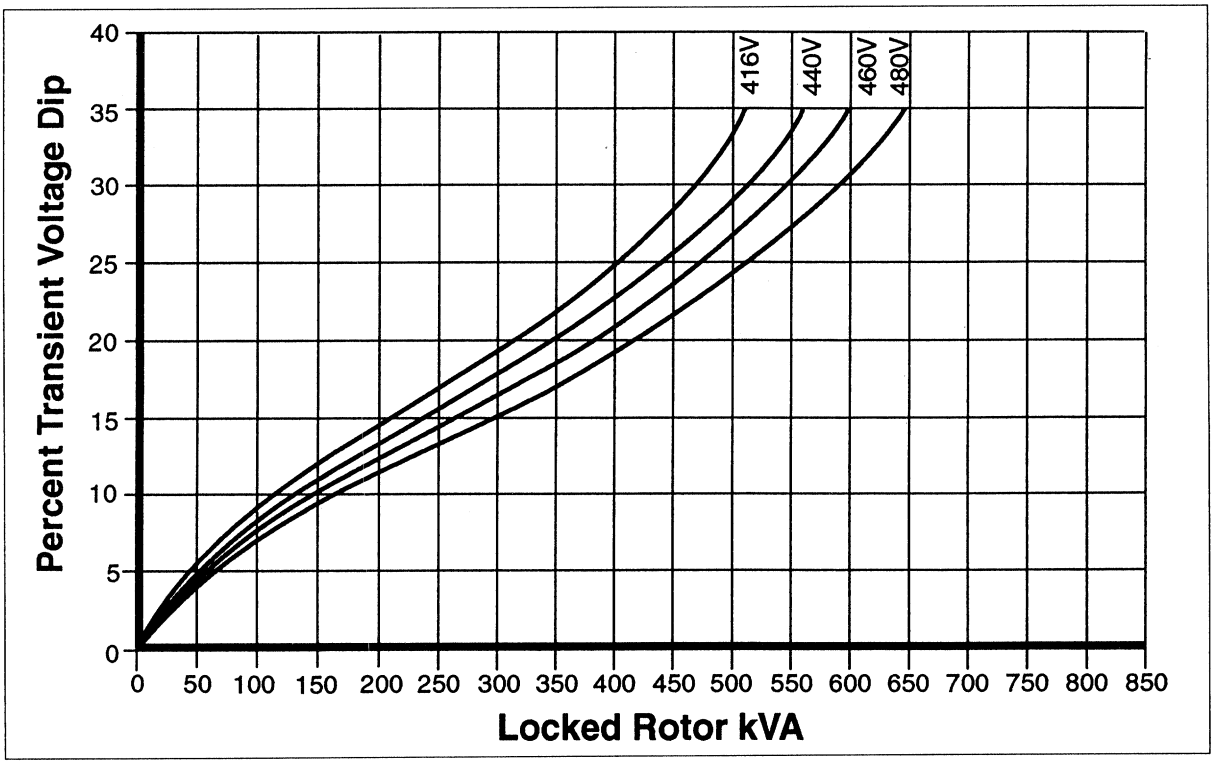
FRAME UC274H 50 HZ

SERIES 4 WINDING 311
LOCKED ROTOR MOTOR STARTING CURVE

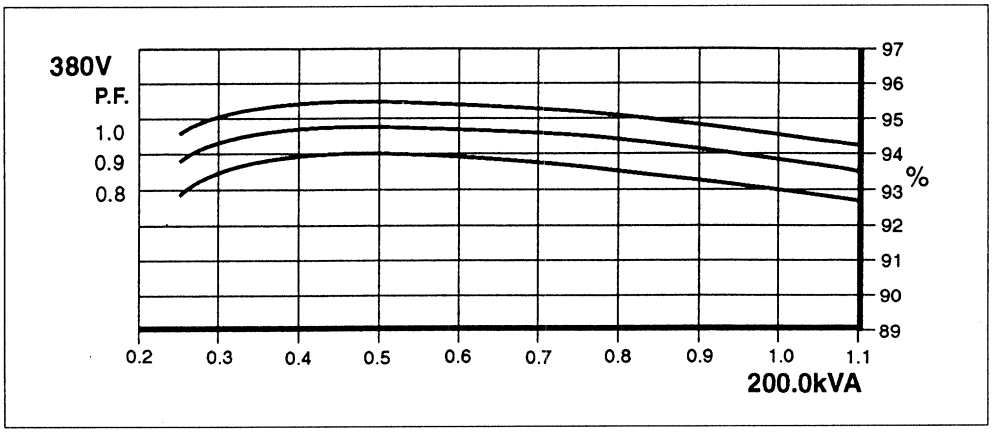


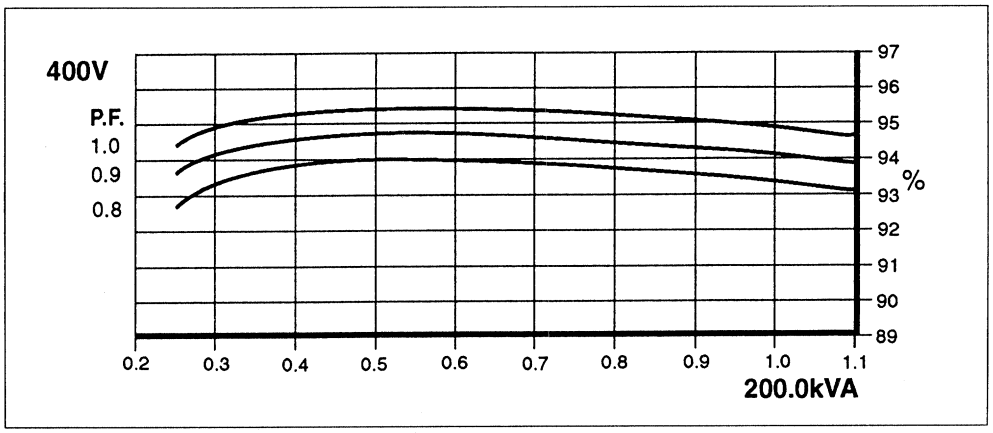
FRAME UC274H 60 HZ

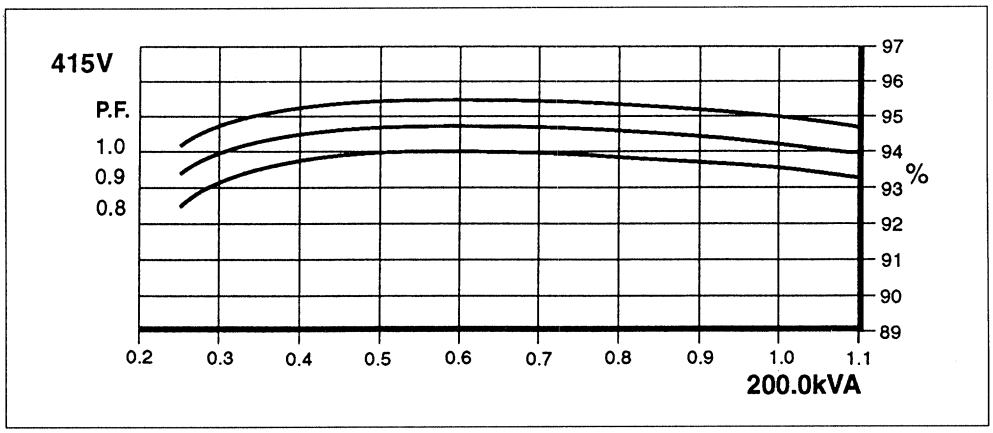
SERIES 4 WINDING 311
LOCKED ROTOR MOTOR STARTING CURVE

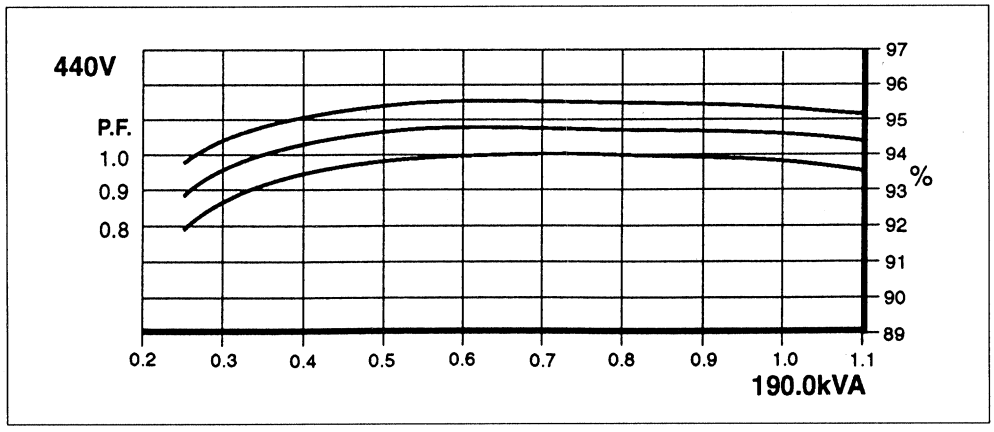


THREE PHASE EFFICIENCY CURVES

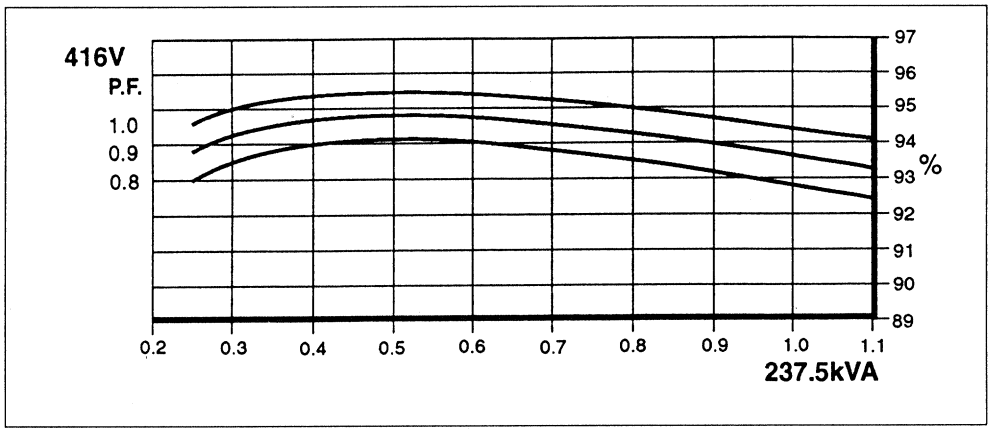


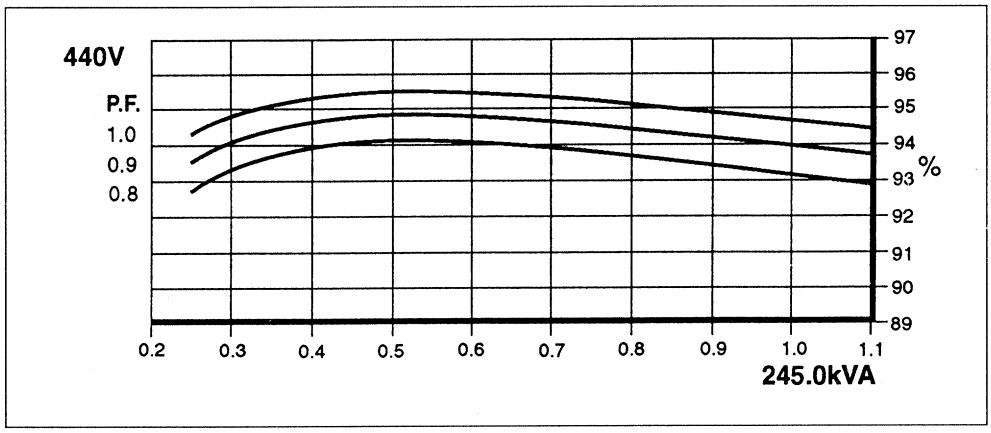


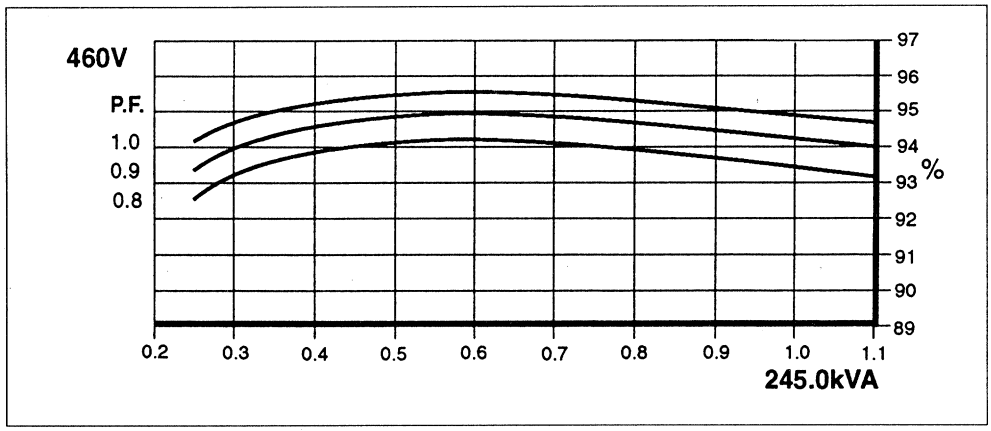


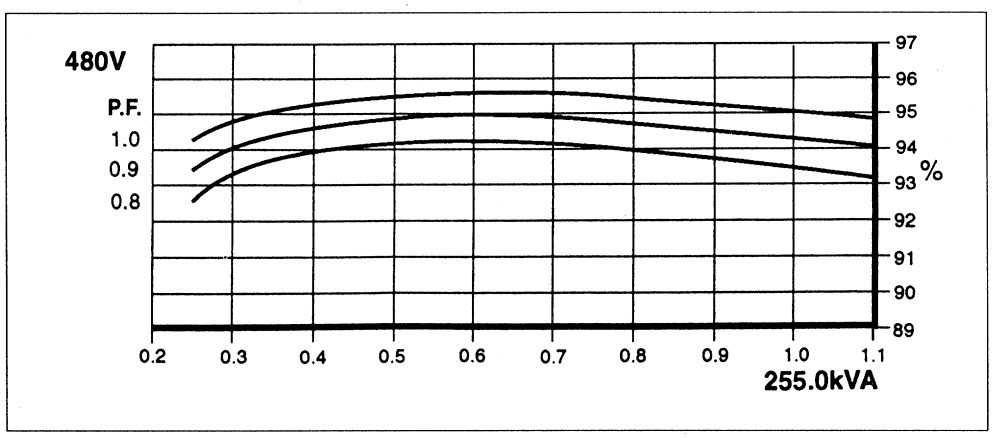


THREE PHASE EFFICIENCY CURVES





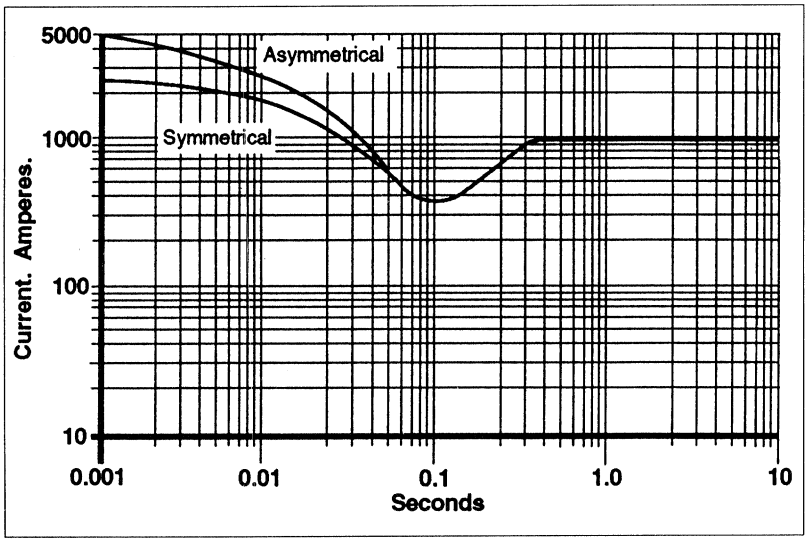




FRAME UC274H 50 HZ

SERIES THREE
Three Phase Short Circuit Decrement Curve
No-load Excitation at Rated Speed

Based on series star (wye) connection



Note 1

The following multiplication factors should be used to adjust the values from curve between time 0.001 seconds and the minimum current point in respect of nominal operating voltage :

VOLTAGE	FACTOR
380 V	X 1.0
400 V	X 1.07
415 V	X 1.12
440 V	X 1.18

The sustained current value is constant irrespective of voltage level.

Note 2

The following multiplication factors should be used to convert the values calculated in accordance with NOTE 1 to those applicable to the various types of short circuit :

	3 PHASE	2 PHASE L-L	1 PHASE L-N
Instantaneous	X 1.00	X 0.87	X 1.30
Minimum	X 1.00	X 1.80	X 3.20
Sustained	X 1.00	X 1.50	X 2.50
Max. sustained duration	10 sec.	5 sec.	2 sec.

All other times are unchanged.

Note 3

Curves are drawn for Series Star (Wye) connected machines. For other connections the following multipliers should be applied to current values shown :

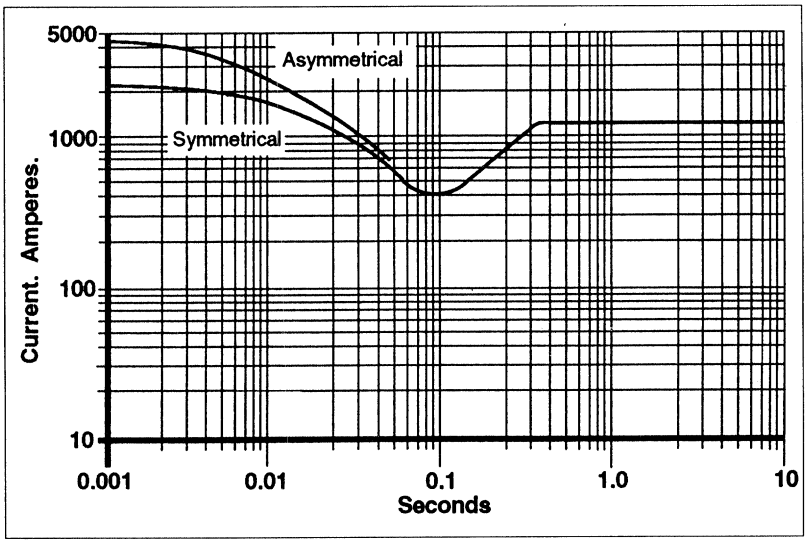
Parallel Star (Wye) Curve current value X 2
Series Delta (Δ) Curve current value X 1.732

Times are unchanged.

FRAME UC274H 60 HZ

SERIES THREE
Three Phase Short Circuit Decrement Curve
No-load Excitation at Rated Speed

Based on series star (wye) connection



Note 1

The following multiplication factors should be used to adjust the values from curve between time 0.001 seconds and the minimum current point in respect of nominal operating voltage :

VOLTAGE	FACTOR
416 V	X 1.0
440 V	X 1.06
460 V	X 1.12
480 V	X 1.17

The sustained current value is constant irrespective of voltage level.

Note 2

The following multiplication factors should be used to convert the values calculated in accordance with NOTE 1 to those applicable to the various types of short circuit :

	3 PHASE	2 PHASE L-L	1 PHASE L-N
Instantaneous	X 1.00	X 0.87	X 1.30
Minimum	X 1.00	X 1.80	X 3.20
Sustained	X 1.00	X 1.50	X 2.50
Max. sustained duration	10 sec.	5 sec.	2 sec.

All other times are unchanged.

Note 3

Curves are drawn for Series Star (Wye) connected machines. For other connections the following multipliers should be applied to current values shown :

Parallel Star (Wye) Curve current value X 2
Series Delta (Δ) Curve current value X 1.732

Times are unchanged.

NEWAGE
INTERNATIONAL

NEWAGE INTERNATIONAL LIMITED
PO BOX 17, Barnack Road, Stamford, Lincolnshire PE9 2NB, England.
Telephone 44 (0) 1780 484000
Telex 32268 Cables Newage Stamford Fax 44 (0) 1780 484100