



ottomotores

CUMMINS SERIE QST

Energía que Mueve al Mundo

Definiciones

Potencia Prime

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

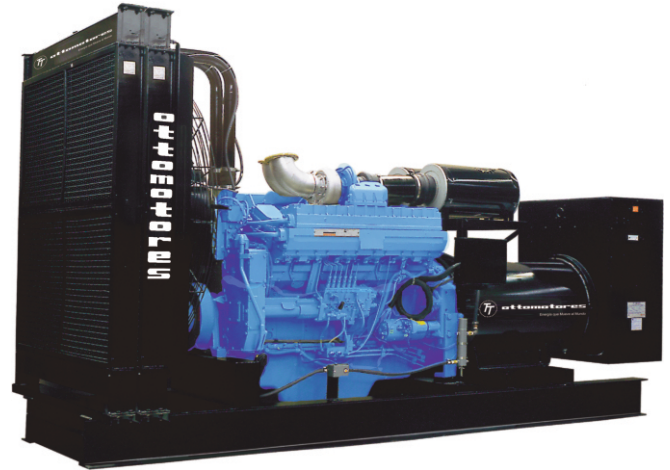
Potencia Stand by

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 sobrecarga sobre estos valores.

Tabla de Potencias

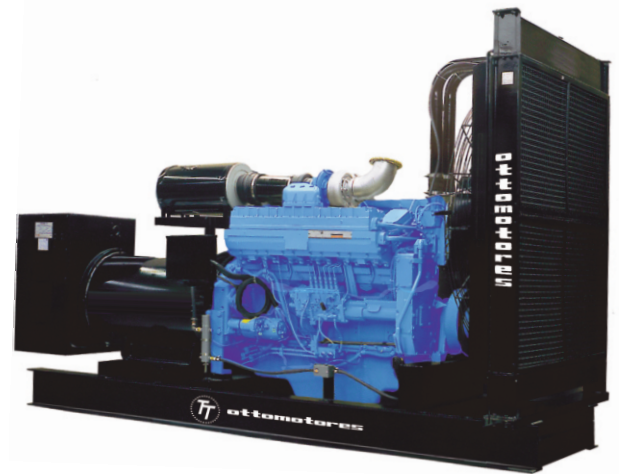
Modelo	Voltaje	kVA Prime	kWe Prime	kVA Stand-by	kWe Stand-by
CNY900	220-440V	1023	818	1125	900
CNY1000	220-440V	1136	909	1250	1000

0.8 Factor de potencia



Información Técnica

Datos Técnicos	CNY900	CNY1000
Frecuencia:	60 Hz	60 Hz
Marca / Modelo	QST30G3	QST30G4
Generador Modelo:	Stamford HCI634H	Stamford HCI634J
Número de Cilindros:	12 en "V"	12 en "V"
Diametro por Carrera .in (mm)	5.51X6.50 (140X165)	5.51X6.50 (140X165)
Relación de Compresión:	14	14.0:1
Aspiración:	turbo y postenfriado	turbo y postenfriado
Velocidad:	1800 RPM	1800 RPM
Potencia: BHP(kWm)	1350 (1007)	1490 (1112)
Presion Efectiva: psi (kPA)	320 (2206)	352 (2427)
Velocidad dePiston: ft/min (m/s)	1949 (9.9)	1949 (9.9)
Consumo a plena carga: lt / hr - 100%	228.00	267.00
Calor Expulsado en el Sistema de Escape: BTU/min (kWm)	39590 (695)	42130 (740)
Calor Expulsado en el Sistema de Enfriamiento: BTU/min (kWm)	27940 (490)	20880 (365)
Temperatura de Escape: °F (°C)	897 (481)	975 (525)
Fujo de Enfriamiento en el Radiador m³/seg - FPM	llame a fabrica	llame a fabrica
Fujo de Escape: cfm (liter/s)	6945 (3280)	7775 (3670)



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

Como leer nuestro codigo: Ejem: CNY900

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



Ottomotores, S.A de C.V.

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email: ventas@ottomotores.com.mx

sitio web: www.ottomotores.com.mx

Dimensiones

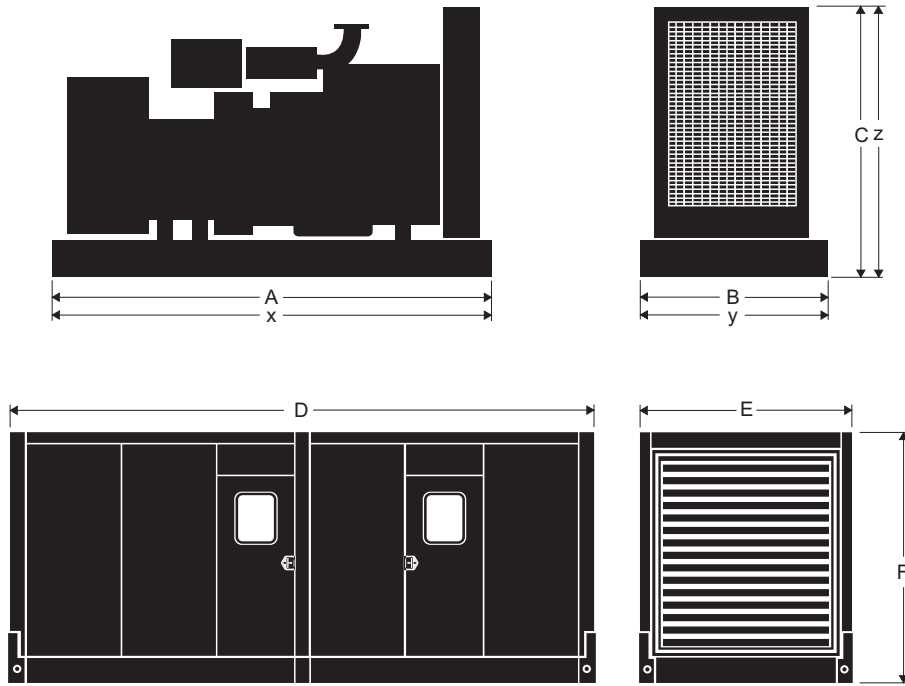


Tabla de Dimensiones

Modelo	Equipo con Base Estructural			Equipo con Base Tanque			Equipo con Caseta Acústica*		
	A	B	C	x	y	z	D	E	F
CNY900	410,00	162,50	238,50	llame a fabrica			595,00	254,00	215,00
	Peso: 5840.00 kgs								
CNY1000	435,00	194,00	245,00	llame a fabrica			Peso: 8945.00 kgs		
	Peso: 6205.00 kgs								

[*] Equipo opcional

Información Técnica

Nota: las condiciones de referencia estándar son de 25 °C (77 ° 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, así 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, así como el monitoreo del grupo generador.



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



Los módulos pueden ser monitoreados através de un excelente software para observar parámetros del equipo de manera fácil y rápida.



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



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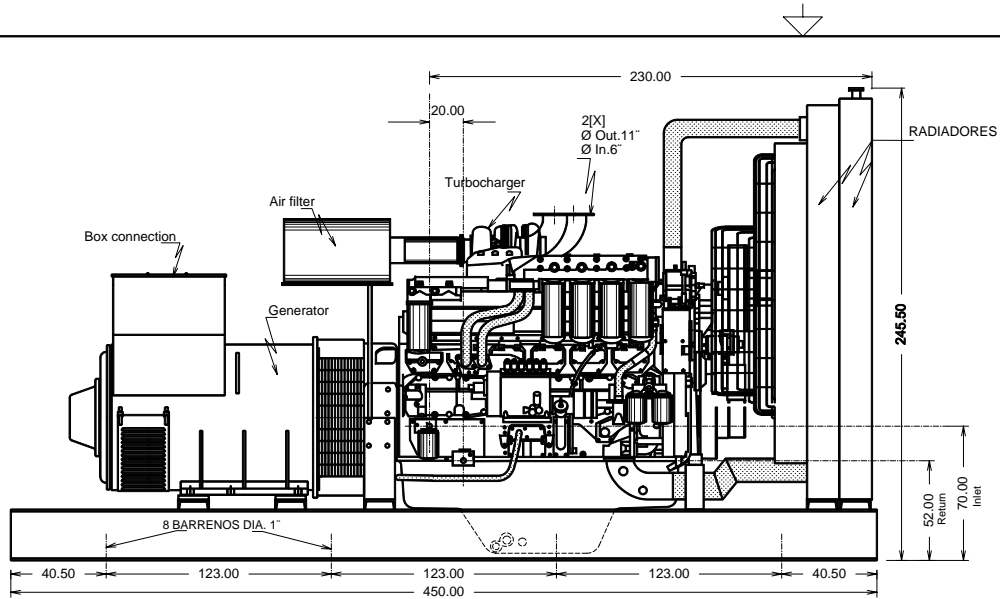
Energía que Mueve al Mundo

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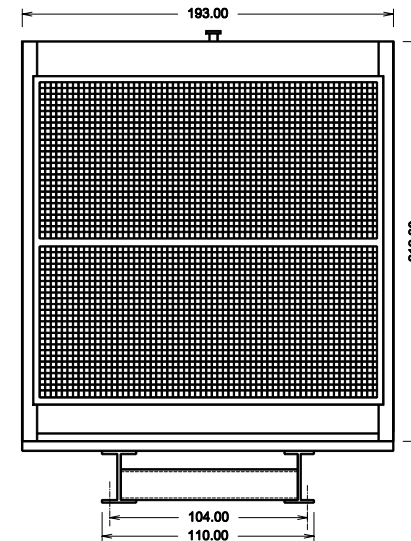
E-mail ventas1@ottomotores.com.mx
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Web site. www.ottomotores.com.mx

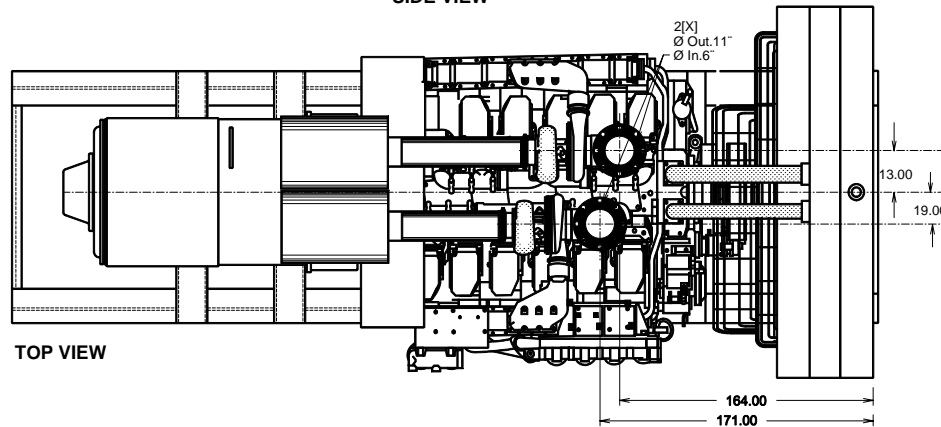
MODELS
CNE1100
CNY1000



SIDE VIEW



FRONT VIEW





TOP VIEW


DESCRIPTION	
RADIATOR:	OV32 5H
ENGINE:	QST 30 G4
AIR: FILTER:	AH1135 (2X)
BASE FRAME:	BP-QSTG4-STF
# SPRING AVMS:	8 PZS

-THE GENSET DIMENSIONS ARE THE SAME BY FAMILY MODEL, THERE COULD BE ONLY DIFFERENCES ON THE ALTERNATOR LENGTH SEE SPECIFIC GENERAL ARRANGEMENT DRAWING OF CERTAIN MODEL
-TOTAL WEIGHT COULD VARY CHECK RATING CHART FOR EACH MODEL

Customer: _____ S/O: _____

Rev.	Description	Date	Certificated

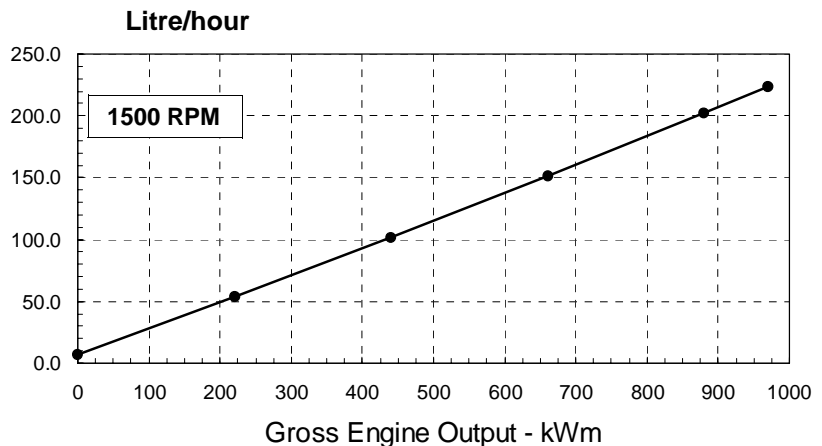
Title: CUMMINS ENGINE QST30G4 - STAMFORD ALTERNATOR			
Draw: R.G.C.	Revised: F.H.M.	Certificated: F.H.M.	Code: CNEY-14
Date: JAN 05th 2005	Date: JAN 05th 2005	Date: JAN 05th 2005	Dept.: Engineering
 		Marks: cms	Draw:
		Scale: s/e	Of:
Reviews			
Otomotors keeps the right to change the information with out prior notice			

	CUMMINS ENGINE COMPANY, INC Columbus, Indiana 47201 ENGINE PERFORMANCE CURVE	Basic Engine Model: QST30-G4	Date: 8May00	G-DRIVE QST 1
		Engine Critical Parts List: CPL: 2499 (2 Pump / 2 Loop) CPL: 2548 (Air-to-Air)	Curve Number: FR-5160 (2P/ 2L) FR-5162 (Air-to-Air)	
Displacement : 30.48 litre (1860 in³)		Bore : 140 mm (5.51 in) Stroke : 165 mm (6.50 in)		
No. of Cylinders : 12		Aspiration : Turbocharged and Low Temperature Aftercooled		

Engine Speed RPM	Standby Power		Prime Power		Continuous Power	
	kWm	BHP	kWm	BHP	kWm	BHP
1500	970	1300	880	1180	683	915
1800	1112	1490	1007	1350	832	1115

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	970	1300	0.196	0.323	224	59.1
PRIME POWER						
100	880	1180	0.195	0.320	202	53.2
75	660	885	0.194	0.319	151	39.8
50	440	590	0.197	0.324	102	26.9
25	220	295	0.207	0.341	54	14.2
CONTINUOUS POWER						
100	683	915	0.194	0.319	156	41.1



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

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

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.

PRIME POWER RATING

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

Limited Time 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 may 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.

CONTINUOUS POWER RATING

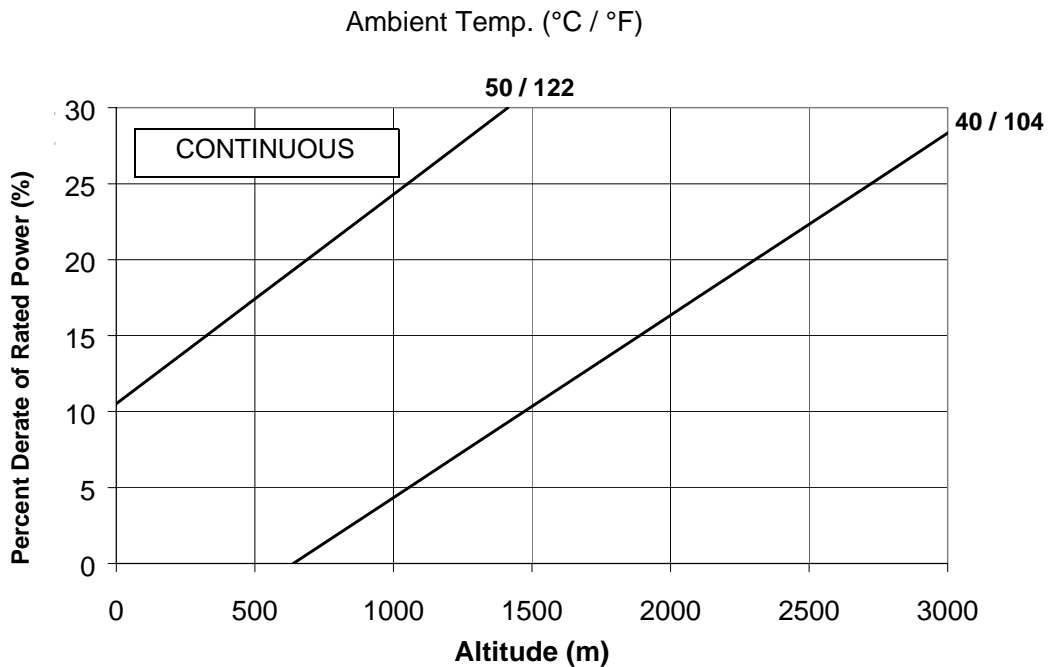
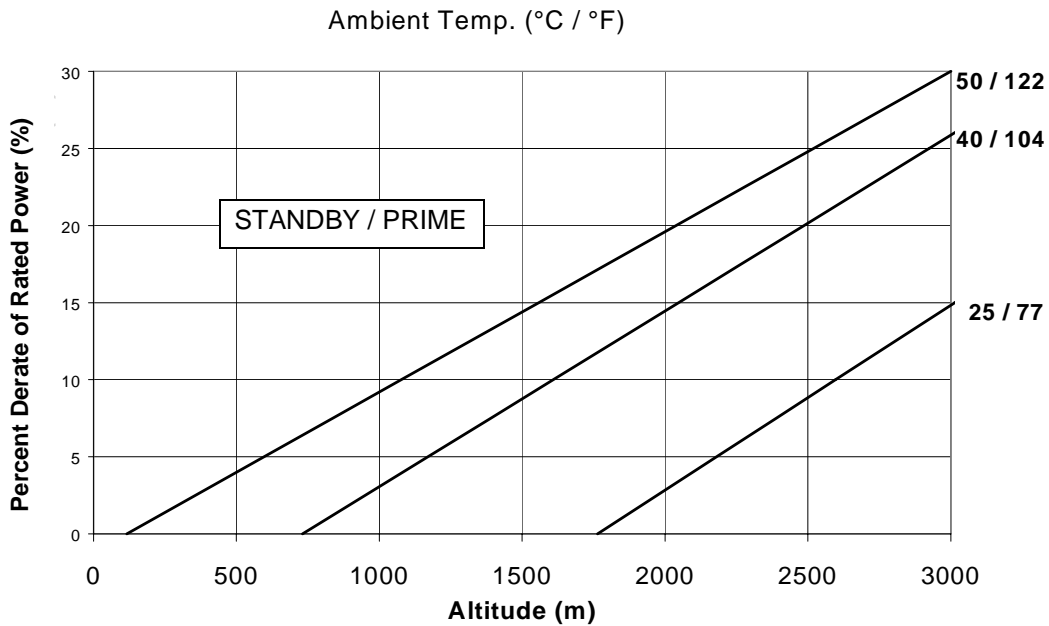
Applicable for supplying utility power at a constant 100% load for an unlimited number of hours per year. No overload capability is available for this rating.

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.

QST30-G4 Derate Curves @ 1500 RPM CURVE NO: FR-5160 (2 Pump 2 loop)
 FR5162 (Air-to-Air)
 DATE: 8May00




Reference Standards:

BS-5514 and DIN-6271 standards are based on ISO-3046.

Operation At Elevated Altitude and Temperature:

For sustained operation above these conditions, derate an additional 9% per 500 m (1640 ft) and 15% per 10°C (18°F)

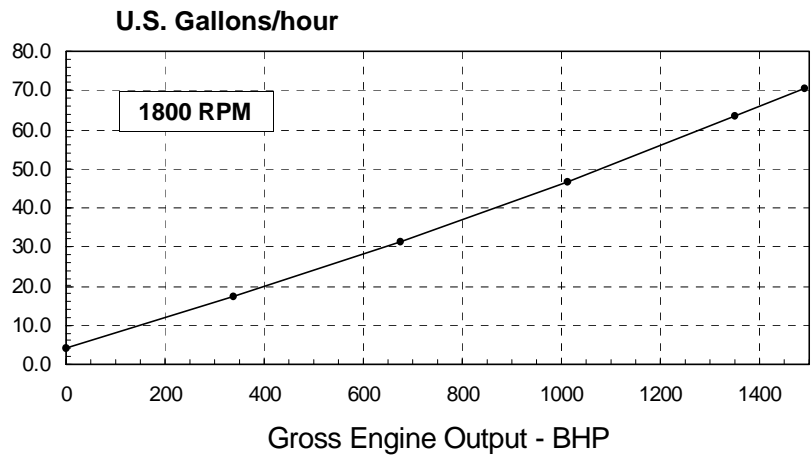
Note: Derates shown are based on 15 in H₂O air intake restriction and 2 in Hg exhaust back pressure.

	CUMMINS ENGINE COMPANY, INC Columbus, Indiana 47201 ENGINE PERFORMANCE CURVE	Basic Engine Model: QST30-G4	Date: 8May00	G-DRIVE QST 3
		Engine Critical Parts List: CPL: 2499 (2 Pump / 2 Loop) CPL: 2548 (Air-to-Air)	Curve Number: FR-5160 (2P / 2L) FR-5162 (Air-to-Air)	
Displacement : 30.48 litre (1860 in³)		Bore : 140 mm (5.51 in) Stroke : 165 mm (6.50 in)		
No. of Cylinders : 12		Aspiration : Turbocharged and Low Temperature Aftercooled		

Engine Speed RPM	Standby Power		Prime Power		Continuous Power	
	kWm	BHP	kWm	BHP	kWm	BHP
1500	970	1300	880	1180	683	915
1800	1112	1490	1007	1350	832	1115

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	1112	1490	0.204	0.336	267	70.5
PRIME POWER						
100	1007	1350	0.203	0.333	240	63.3
75	756	1013	0.199	0.327	177	46.7
50	504	675	0.202	0.331	119	31.5
25	252	338	0.223	0.366	66	17.4
CONTINUOUS POWER						
100	832	1115	0.199	0.327	194	51.4



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)

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.

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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.

PRIME POWER RATING

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.

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CONTINUOUS POWER RATING

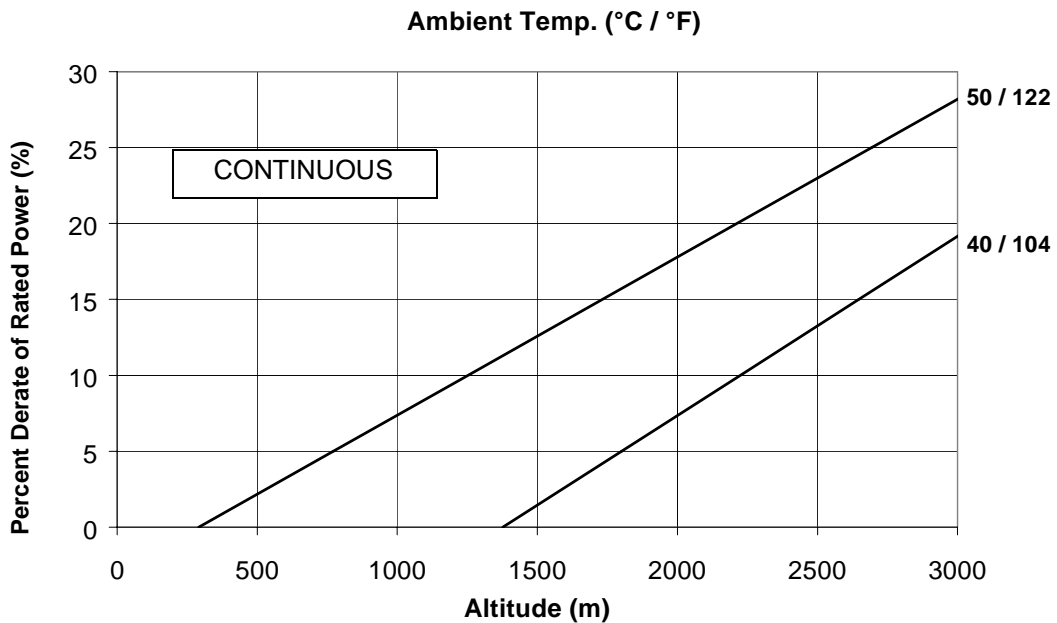
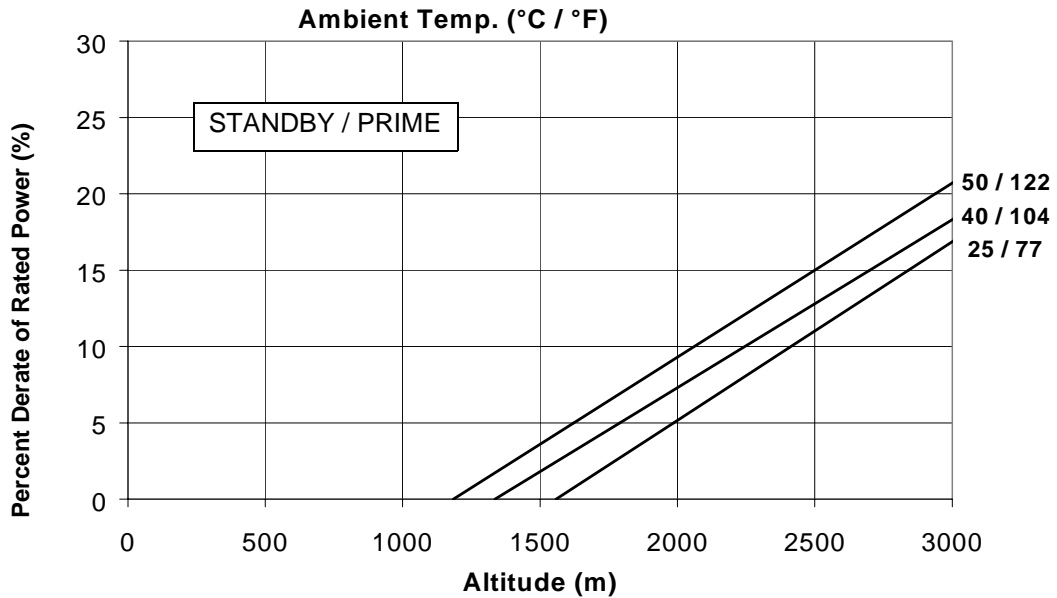
Applicable for supplying utility power at a constant 100% load for an unlimited number of hours per year. No overload capability is available for this rating.

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.

D.K. Trueblood



Reference Standards:

BS-5514 and DIN-6271 standards are based on ISO-3046.

Operation At Elevated Altitude and Temperature:

For sustained operation above these conditions, derate an additional 9% per 1000 ft (300 m) and 15% per 10°C (18°F).

Note: Derates shown are based on 15 in H₂O air intake restrictions and 2 in Hg exhaust back pressure.

Cummins Engine Company, Inc.

Engine Data Sheet

G-DRIVE

QST

5

ENGINE MODEL : QST30-G4

CONFIGURATION NUMBER : D573001GX03

DATA SHEET : DS-5160

DATE : 8May00

**PERFORMANCE CURVE : FR-5160 (2P / 2L)
FR-5162 (A - A)**

INSTALLATION DIAGRAM

- Fan to Flywheel (2 Pump / 2 Loop): 3170314
- Fan to Flywheel (Air-to-Air): 3170341

CPL NUMBER

- Engine Critical Parts List (2 Pump / 2 Loop) :2499
- Engine Critical Parts List (Air-to-Air) :2548

GENERAL ENGINE DATA

Type.....	4-Cycle; 50° Vee; 12-Cylinder Diesel
Aspiration	Turbocharged and Low Temperature Aftercooled
Bore x Stroke	140 x165 (5.51 x 6.50)
Displacement.....	30.48 (1860)
Compression Ratio.....	14.0 : 1
Dry Weight,Fan to Flywheel Engine.....	3012 (6640)
Wet Weight,Fan to Flywheel Engine.....	3112 (6860)
Moment of Inertia of Rotating Components	
• with FW 5050 Flywheel	8.7 (206)
Center of Gravity from Rear Face of Flywheel Housing (FH 5031)	845 (33.3)
Center of Gravity Above Crankshaft Centerline	195 (7.7)
Maximum Static Loading at Rear Main Bearing.....	950 (2100)

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Block.....	3100 (2286)
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EXHAUST SYSTEM

Maximum Back Pressure.....	51 (2)
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AIR INDUCTION SYSTEM

Maximum Intake Air Restriction	
• with Dirty Filter Element	635 (25)
• with Clean Filter Element.....	381 (15)

COOLING SYSTEM (Low Temperature Aftercooling Required)

Coolant Capacity — Engine Only.....	79 (21)
— Aftercoolers (2 Pump / 2 Loop)	12 (3.2)
Minimum Pressure Cap	69 (10)

Jacket Water Circuit Requirements

Maximum Coolant Friction Head External to Engine — 1500 / 1800 rpm	48 / 69 (7 / 10)
Maximum Static Head of Coolant Above Engine Crank Centerline.....	14 (46)
Standard Thermostat (Modulating) Range	82 - 95 (180 - 203)
Maximum Top Tank Temperature for Standby / Prime Power.....	104 / 100 (220 / 212)

Aftercooler Circuit Requirements (2 Pump / 2 Loop Aftercooling)

Maximum Inlet Water Temperature to Aftercooler @ 77 °F	49 (120)
Maximum Inlet Water Temperature to Aftercooler	65 (150)
Maximum Coolant Friction Head External to Engine — 1500 / 1800 rpm	35 / 48 (5 / 7)

Air-to-Air Core Requirements

Maximum Temp. Rise Between Engine Air Inlet and Intake Manifold — 1500 / 1800 rpm — °C (°F)	33 / 39 (60 / 70)
Maximum Air Press. Drop from Turbo Air Outlet to Intake Manifold — 1500 / 1800 rpm — mm (in Hg)	102 / 127 (4 / 5)

LUBRICATION SYSTEM

Oil Pressure @ Idle Speed	166 (24)
@ Governed Speed.....	310 - 386 (45 - 56)
Maximum Oil Temperature	121 (250)
Oil Capacity with OP 5133 Oil Pan : High - Low.....	133 - 114 (35 - 30)
Total System Capacity (Including Bypass Filter).....	154 (40.7)

FUEL SYSTEM

Type Injection System.....	Bosch P8500 LLA Direct Injection	
Maximum Restriction at Lift Pump — with Clean Fuel Pre-Filter	102 (4.0)	
— with Dirty Fuel Pre-Filter	203 (8.0)	
Maximum Allowable Head on Injector Return Line (Consisting of Friction and Static Head).....	508 (20)	
Maximum Fuel Flow to Injection Pumps (Left and Right Banks Combined) 1500 / 1800 rpm.....	550 / 570 (145 / 150)	
Maximum Fuel Inlet Temperature	71 (150)	
Maximum Return Flow	530 / 550 (140 / 145)	

QST

6

ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty, Positive Engagement).....	— volt	24
Battery Charging System, Negative Ground.....	— ampere	35
Maximum Allowable Resistance of Cranking Circuit.....	— ohm	0.002
Minimum Recommended Battery Capacity		
• Cold Soak @ 10 °C (50 °F) and Above.....	— 0°F CCA	1200
• Cold Soak @ 0 °C to 10 °C (32 °F to 50 °F).....	— 0°F CCA	1280
• Cold Soak @ -18 °C to 0 °C (0 °F to 32 °F).....	— 0°F CCA	1800

COLD START CAPABILITY

Minimum Ambient Temperature for Cold Start with 8000 watt Coolant Heater to Rated Speed.....	— °C (°F)	-7	(20)
Minimum Ambient Temperature for Unaided Cold Start to Idle Speed.....	— °C (°F)	7	(45)
Minimum Ambient Temperature for NFPA110 Cold Start (90°F Minimum Coolant Temperature).....	— °C (°F)	0	(32)

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%
Air Intake Restriction	: 254 mm H ₂ O (10 in H ₂ O)	Exhaust Restriction	: 51 mm Hg (2 in Hg)

Steady State Stability Band at any Constant Load	— %	+/- 0.25
Estimated Free Field Sound Pressure Level of a Typical Generator Set;		
Excludes Exhaust Noise; at Rated Load and 7.5 m (24.6 ft); @1500 / 1800 rpm	— dBA	91 / 93
Exhaust Noise at 1 m Horizontally from Centerline of Exhaust Pipe Outlet Upwards at 45° @1500 / 1800 rpm.....	— dBA	128 / 131

	STANDBY POWER		PRIME POWER	
	60 hz	50 hz	60 hz	50 hz
Governed Engine Speed	1800	1500	1800	1500
Engine Idle Speed.....	700 - 900	700 - 900	700 - 900	700 - 900
Gross Engine Power Output.....	1112 (1490)	970 (1300)	1007 (1350)	880 (1180)
Brake Mean Effective Pressure.....	2427 (352)	2544 (369)	2199 (319)	2310 (335)
Piston Speed	9.9 (1949)	8.3 (1634)	9.9 (1949)	8.3 (1634)
Friction Horsepower	82 (110)	58 (78)	82 (110)	58 (78)
Engine Jacket Water Flow at Stated Friction Head External to Engine:				
• 5 psi Friction Head.....	17.0 (270)	14.2 (225)	17.0 (270)	14.2 (225)
• Maximum Friction Head.....	16.5 (262)	13.7 (217)	16.5 (262)	13.7 (217)
Engine Data with Dry Type Exhaust Manifold				
Intake Air Flow	1340 (2840)	1005 (2130)	1250 (2650)	945 (2005)
Exhaust Gas Temperature	525 (975)	575 (1070)	495 (920)	565 (1050)
Exhaust Gas Flow	3670 (7775)	2980 (6310)	3285 (6960)	2750 (5820)
Air to Fuel Ratio.....	25 : 1	22 : 1	26.5 : 1	22.6 : 1
Radiated Heat to Ambient	130 (7460)	115 (6410)	115 (6650)	105 (5860)
Heat Rejection to Jacket Water Coolant.....	365 (20880)	335 (18940)	340 (19350)	320 (18150)
Heat Rejection to Exhaust.....	740 (42130)	670 (38050)	660 (37640)	600 (33990)
Engine Aftercooler Data				
Heat Rejection to Aftercooler.....	270 (15420)	170 (9560)	215 (12120)	145 (8240)
Aftercooler Water Flow at Stated Friction Head External to Engine:				
• 2 psi Friction Head.....	5.4 (85)	4.5 (71)	5.4 (85)	4.5 (71)
• Maximum Friction Head.....	5.0 (80)	4.4 (68)	5.0 (80)	4.4 (68)
Charge Air Flow.....	93 (205)	70 (154)	87 (192)	66 (145)
Turbocharger Compressor Outlet Pressure	1859 (73)	1534 (60)	1666 (66)	1374 (54)
Turbocharger Compressor Outlet Temperature.....	202 (395)	177 (350)	183 (360)	165 (330)

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

FRAME HC634J

WINDING 311/312

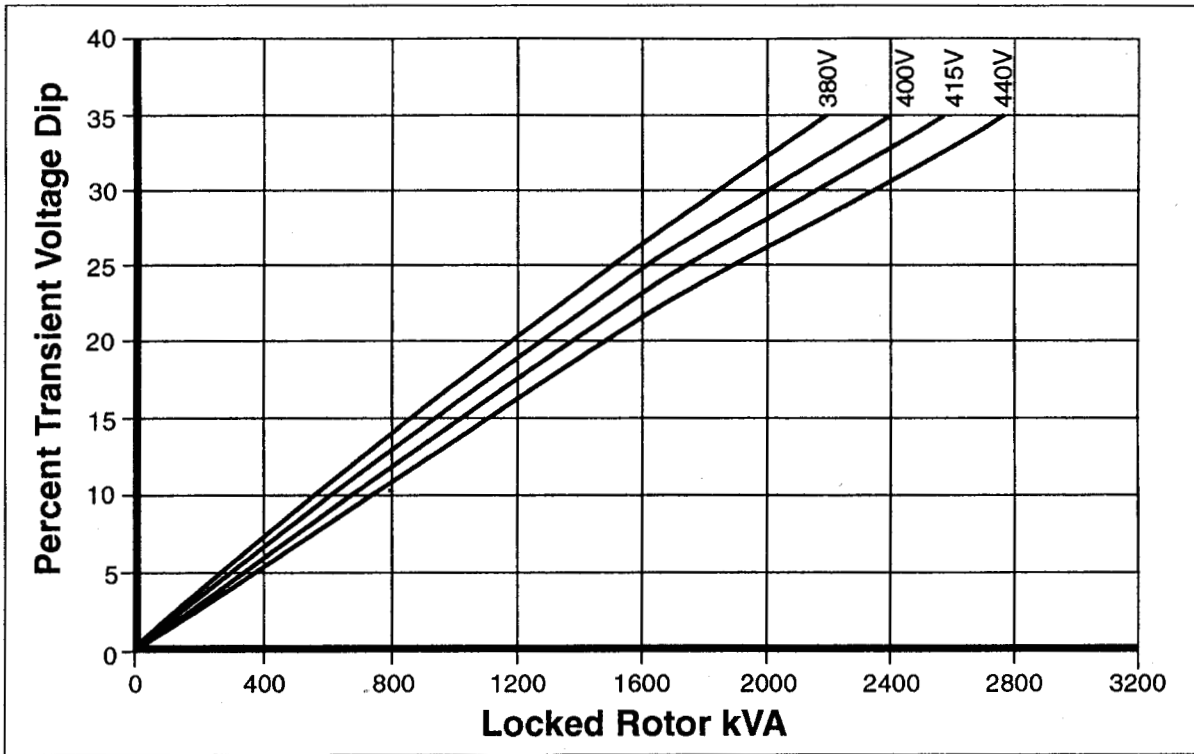
RATINGS	REFER TO RATINGS BOOK
OVERLOAD	REFER TO RATINGS BOOK
ALTITUDE	REFER TO RATINGS BOOK
AMBIENT TEMP.	REFER TO RATINGS BOOK

CONTROL SYSTEM SER. 3	SEPARATELY EXCITED BY P.M.G. FRAME DESIGNATION HC634J	
A.V.R.	MX321	
VOLTAGE REGULATION	± 0.5%	WITH 4% ENGINE GOVERNING
SUSTAINED SHORT CIRCUIT	REFER TO SHORT CIRCUIT DECREMENT CURVES OF THIS SECTION	

INSULATION SYSTEM	CLASS H	
PROTECTION	IP22 STANDARD - IP23 OPTIONAL (5% DERATE)	
RATED POWER FACTOR	0.8	
STATOR WINDING	DOUBLE LAYER LAP	
WINDING PITCH	TWO THIRDS	
WINDING LEADS	12 (311) 6 (312)	
STATOR WDG. RESISTANCE	0.0024 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED	
ROTOR WDG. RESISTANCE	1.73 Ohms at 22°C	
R.F.I. SUPPRESSION	BS EN 50081/2-1/2 VDE 0875G VDE 0875N For other standards apply to the factory	
WAVEFORM DISTORTION	NO LOAD < 1.5 % NON-DISTORTING BALANCED LINEAR LOAD < 5.0 %	
MAXIMUM OVERSPEED	2250 Rev/Min	
BEARING DRIVE END	BALL. 6224 (ISO)	
BEARING NON-DRIVE END	BALL. 6317 (ISO)	
EFFICIENCY	REFER TO EFFICIENCY CURVES OF THIS SECTION	
	1 BEARING	2 BEARING
WEIGHT COMP. GENERATOR	2268 kg	2269 kg
WEIGHT WOUND STATOR	1120 kg	1120 kg
WEIGHT WOUND ROTOR	951 kg	885.3 kg
WR ² INERTIA	19.03 kgm ²	18.26 kgm ²

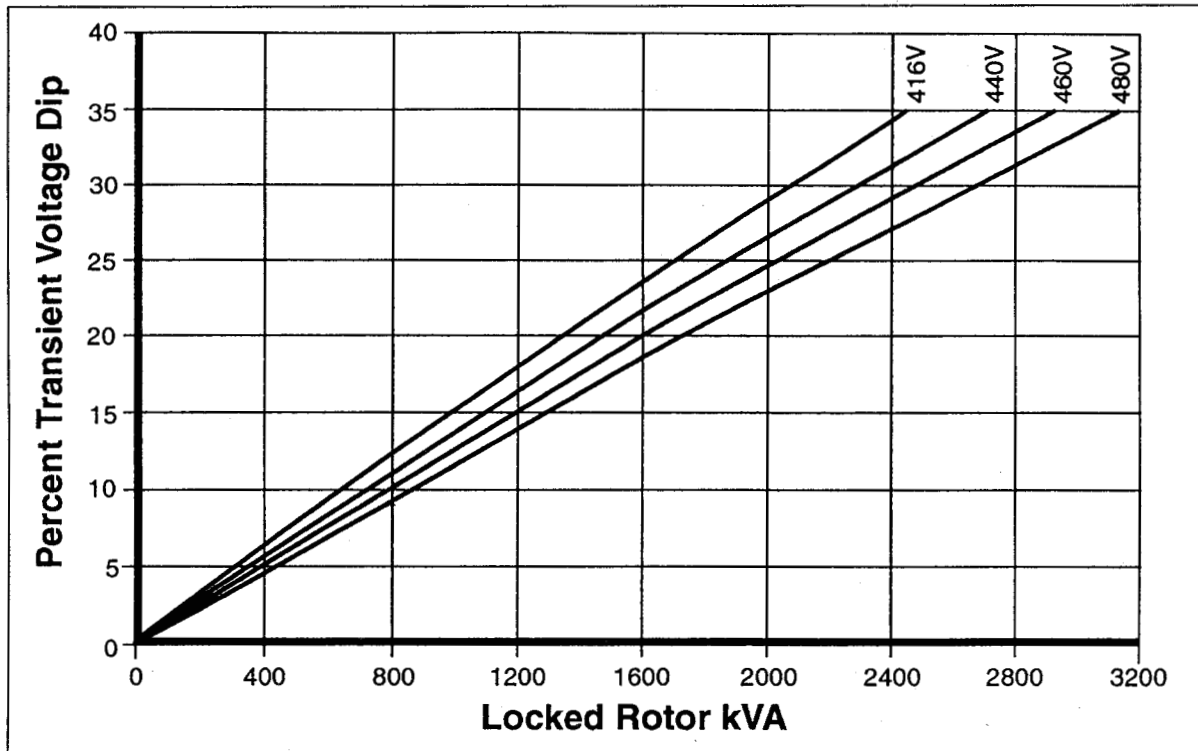
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF < 2%				TIF < 50			
COOLING AIR	1.614 m ³ /sec 3420 cfm				1.961 m ³ /sec 4156 cfm			
WINDING 311								
VOLTAGE SERIES STAR (Y)	380/220	400/231	415/240	440/254	416/240	440/254	460/266	480/277
VOLTAGE PARALLEL STAR (Y)	190/110	200/115	208/120	220/127	208/120	220/127	230/133	240/138
VOLTAGE EDISON DELTA (Δ)	220/110	230/115	240/120	250/125	240/120	254/127	266/133	277/138
WINDING 312								
VOLTAGE SERIES STAR (Y)	380/220	400/231	415/240	440/254	416/240	440/254	460/266	480/277
VOLTAGE DELTA (Δ)	220	230	240	250	240/120	254/127	266/133	277/138
kVA BASE RATING FOR REACTANCE VALUES	1000	1000	1000	1000	1150	1200	1250	1300
X _d DIR. AXIS SYNCHRONOUS	3.03	2.73	2.54	2.26	3.49	3.25	3.10	2.96
X' _d DIR. AXIS TRANSIENT	0.24	0.22	0.20	0.18	0.28	0.26	0.25	0.24
X'' _d DIR. AXIS SUBTRANSIENT	0.17	0.15	0.14	0.13	0.19	0.18	0.17	0.16
X _q QUAD. AXIS REACTANCE	1.78	1.61	1.49	1.33	2.05	1.91	1.82	1.74
X'' _q QUAD. AXIS SUBTRANSIENT	0.21	0.19	0.18	0.16	0.25	0.23	0.22	0.21
X _L LEAKAGE REACTANCE	0.090	0.081	0.075	0.067	0.104	0.097	0.092	0.088
X ₂ NEGATIVE SEQUENCE	0.21	0.19	0.18	0.16	0.25	0.23	0.22	0.21
X ₀ ZERO SEQUENCE	0.026	0.023	0.022	0.019	0.029	0.027	0.026	0.025
REACTANCES ARE SATURATED					VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED			
T' _d TRANSIENT TIME CONST.	0.185 sec							
T'' _d SUB-TRANSTIME CONST.	0.025 sec							
T' _{do} O.C. FIELD TIME CONST.	3.03 sec							
T _a ARMATURE TIME CONST.	0.046 sec							
SHORT CIRCUIT RATIO	1/X _d							

**SERIES 3 WINDING 311/312
LOCKED ROTOR MOTOR STARTING CURVE**

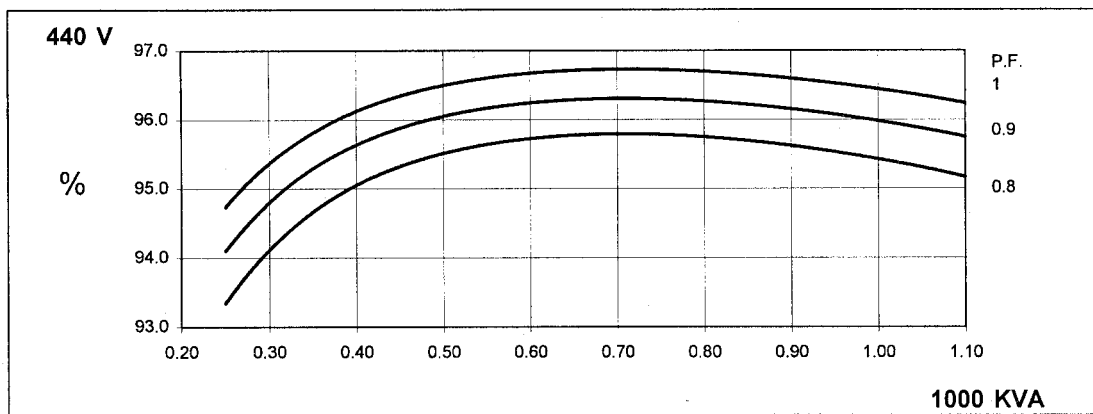
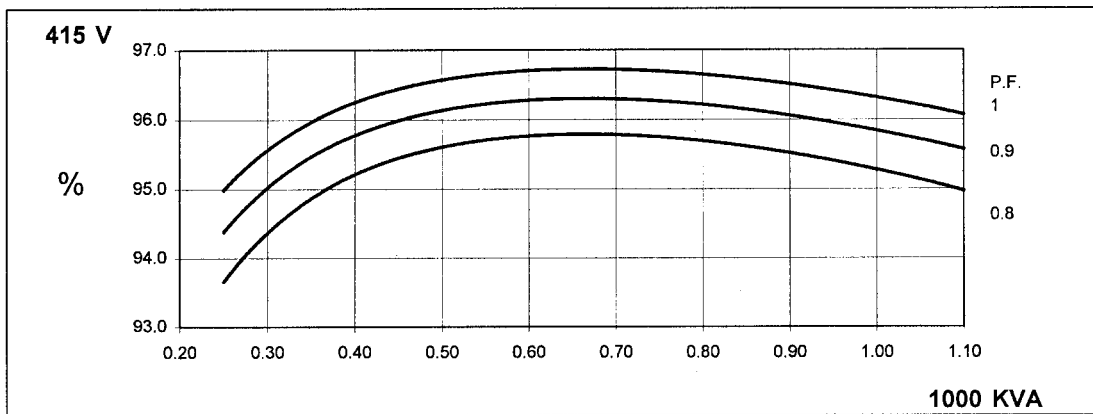
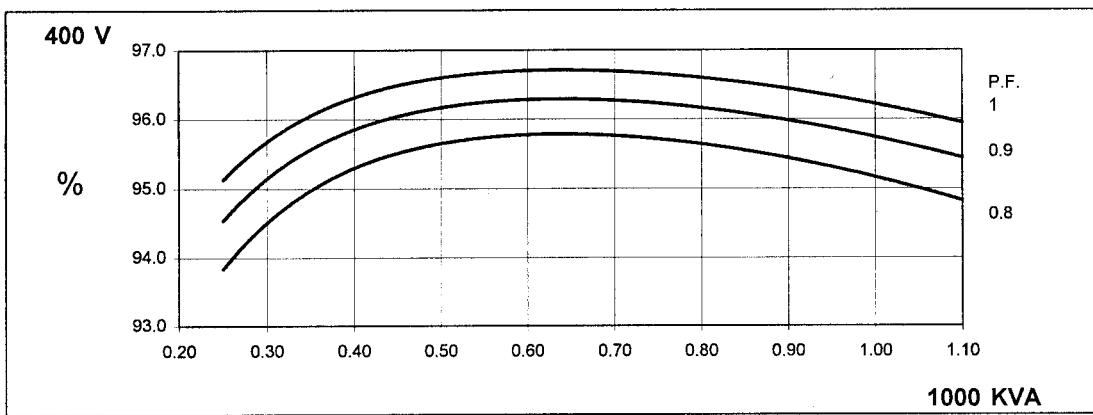
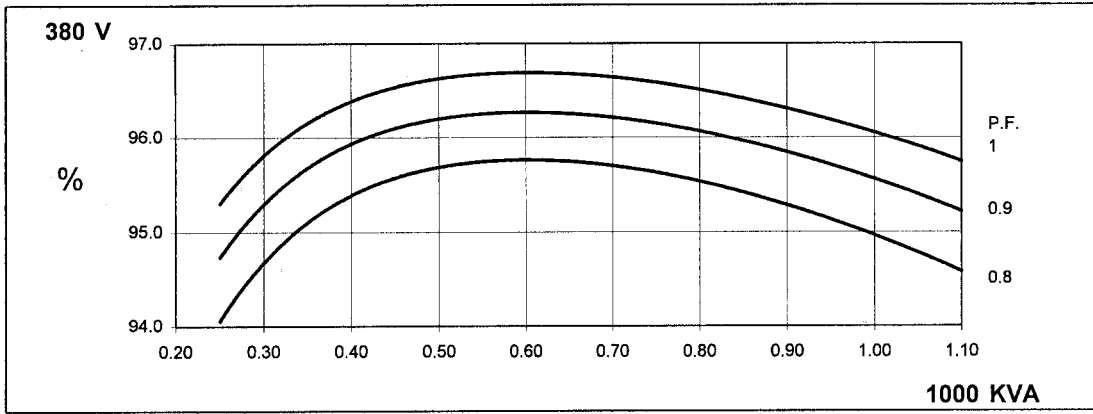


FRAME HC634J 60 Hz

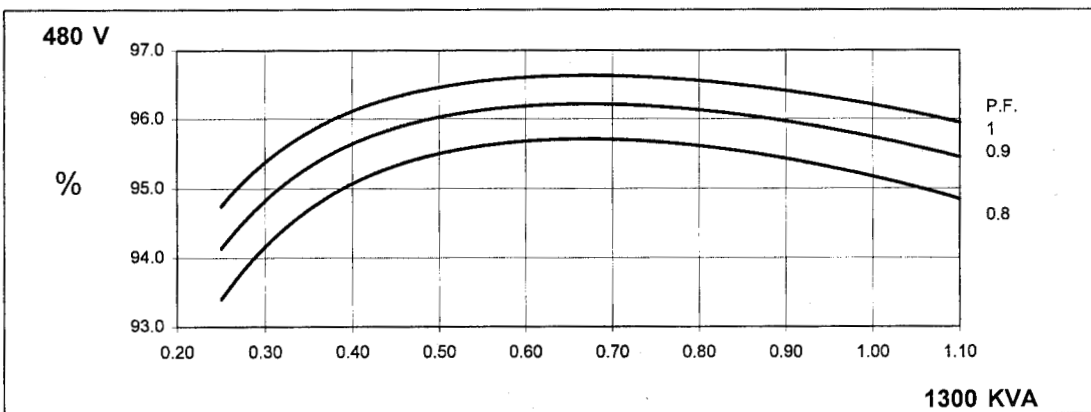
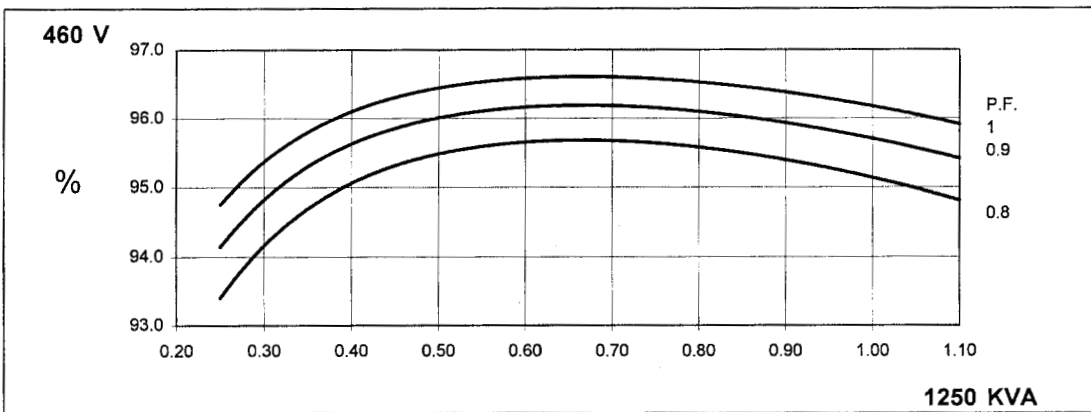
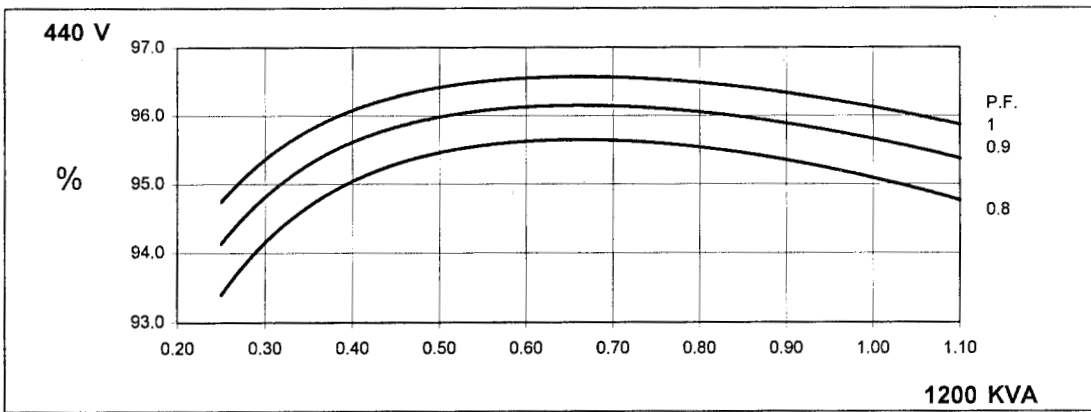
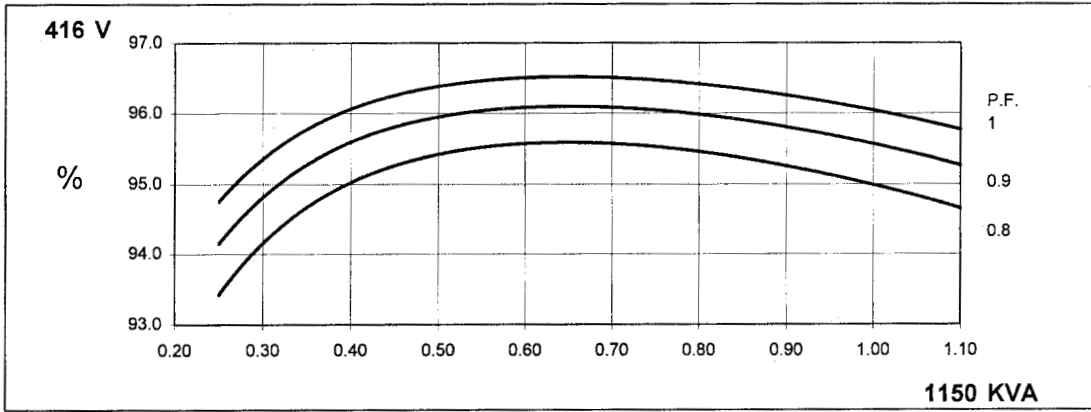
**SERIES 3 WINDING 311/312
LOCKED ROTOR MOTOR STARTING CURVE**



THREE PHASE EFFICIENCY CURVES



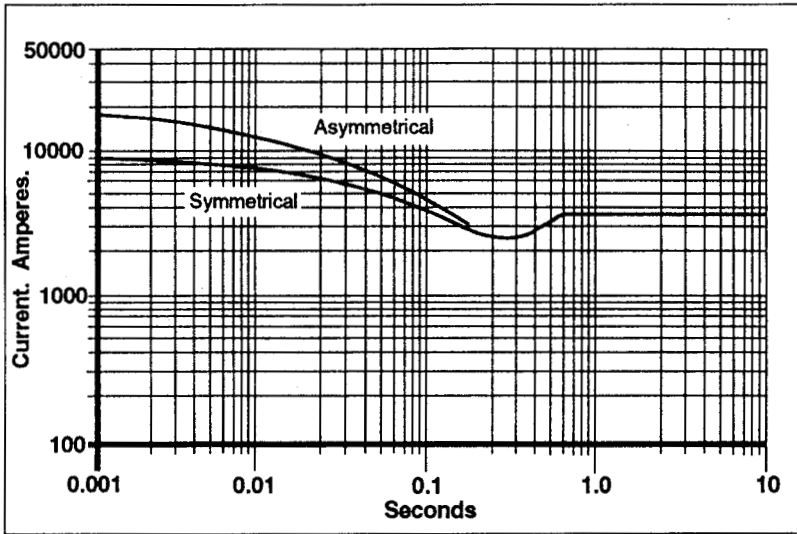
THREE PHASE EFFICIENCY CURVES



FRAME HC634J 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 Winding 311 Only

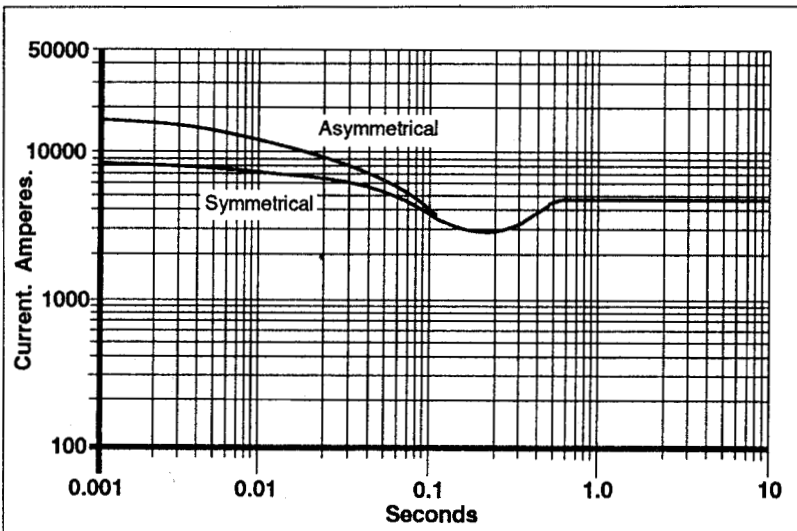
Curves are drawn for Series Star (Wye) connected machines. For other connections the following multipliers should be applied to current values shown :

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

FRAME HC634J 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 Winding 311 Only

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
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