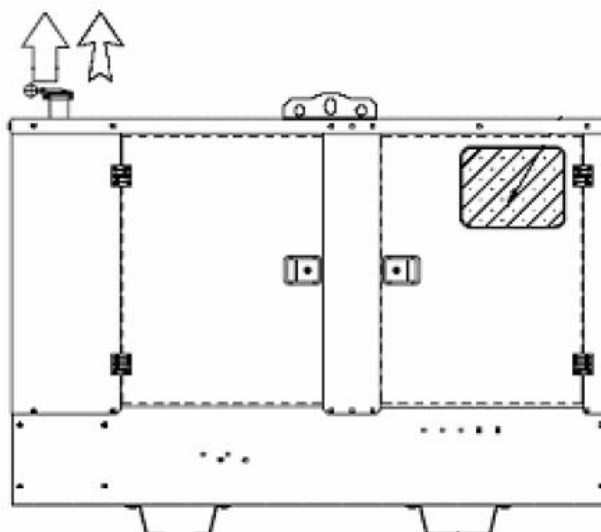


MODEL
MODELE
MODELO
MODELLO

GX71P



SOUNDPROOF VERSION



GENERATING SET PERFORMANCE PERFORMANCES DU GROUPE PRESTACIONES DEL GRUPO PRESTAZIONI DEL GRUPPO		50 Hz	60 Hz
Voltage Voltage Voltaje Tensione		V 400 / 230	V 220 / 127
Continuous Power Puissance service continue Potencia servicio continuo Potenza servizio continuo	PRP	kVA 60	kVA 68
Stand-by Power Puissance service secours Potencia servicio emergencia Potenza servizio in emergenza	LTP	kVA 66	kVA 75
Continuous Power Puissance service continue Potencia servicio continuo Potenza servizio continuo	PRP	kWe 48	kWe 54
Stand-by Power Puissance service secours Potencia servicio emergencia Potenza servizio in emergenza	LTP	kWe 53	kWe 60
Power factor Facteur de puissance Factor de potencia Fattore di potenza	cos φ	0,8	0,8
Fuel consumption Consommation combustible Consumo de combustible Consumo combustibile	70 %	l/h 9,3	l/h 11,0

ENGINE MOTEUR MOTOR MOTORE		PERKINS		1103A-33TG2	
PERFORMANCE PERFORMANCES PRESTACIONES PRESTAZIONI		1500 rpm		1800 rpm	
Continuous Power					
Puissance service continue	PRP	kWm	53,8	kWm	61,2
Potencia servicio continuo					
Potenza servizio continuo					
Stand-by Power					
Puissance service secours	LTP	kWm	59,3	kWm	67,5
Potencia servicio emergencia					
Potenza servizio in emergenza					
Specific fuel consumption			50 % 221		50 % 229
Consommation spécifique combustible		g/kWh	75 % 212	g/kWh	75 % 216
Consumo específico de combustible			100 % 214		100 % 207
Consumo specifico combustibile			110 % 215		110 % 214
Diesel 4 Stroke – Injection type					direct
Diesel 4 temps – Type injection					directe
Diesel 4 tiempos – Tipo de inyección					directa
Diesel a 4 tempi – Tipo di iniezione					diretta
Aspiration type					Turbocharged
Type d'aspiration					Suraalimentée
Tipo de aspiración					sobrealimentato
Tipo d'aspirazione					sovralimentata
Cooling system					Water
Refroidissement					Eau
Sistema de refrigeración					Agua
Raffreddamento					Acqua
Speed governor					Mechanical
Régulateur de tours					Mécanique
Regulador					Mecánico
Regolatore di giri					Meccanico
Cylinders, numbers and arrangement					
Nombre et disposition des cylindres					3 L
Cilindros, número y disposición					
Numero e disposizione dei cilindri					
Total displacement					
Cylindrée totale				cm ³	3.300
Cilindrata total					
Cilindrata totale					
Bore x stroke					
Alésage x course				mm	105.0 x 127.0
Diametro x carrera					
Alesaggio x corsa					
Compression ratio					
Rapport de compression					17.25 :1
Relación de compresión					
Rapporto di compressione					
Engine electric system voltage					
Voltage système électrique moteur					12 V
Voltaje sistema eléctrico motor					
Voltaggio sistema elettrico motore					
Derating for temperature				0 ÷ 25°C	0
Déclassement pour temperature					
Declasamiento para temperatura				> 25 °C	2 % / 10°C
Declassamento per temperatura					
Derating for altitude					
Déclassement pour altitude				0 ÷ 1000 m	0
Declasamiento para altitud					
Declassamento per altitudine				> 1000m	1,5 % / 500 m

ALTERNATOR ALTERNATEUR ALTERNADOR ALTERNATORE				LEROY SOMER	
PERFORMANCE PERFORMANCES PRESTACIONES PRESTAZIONI		1500 rpm		1800 rpm	
Model Modèle Modelo Modello		LSA 42.3L9		LSA 42.3L9	
Continuous Power Puissance service continue Potencia servicio continuo Potenza servizio continuo	40 °C	kVA kWe	60 48	KVA kWe	69 55,2
Stand-by Power Puissance service secours Potencia servicio emergencia Potenza servizio in emergenza	40 °C	KVA kWe	63,6 50,9	KVA kWe	73,1 58,5
Stand-by Power Puissance service secours Potencia servicio emergencia Potenza servizio in emergenza	27 °C	KVA kWe	66 52,8	KVA kWe	75,9 60,7
Efficiency Rendement Eficienza Efficienza		1/4 2/4 3/4 4/4	90,6 % 92,1 % 91,6 % 90,5 %	1/4 2/4 3/4 4/4	90,8 % 92,6 % 92,2 % 91,1 %
Standard winding connections Liaison des bobinages Tipo de conexión Collegamento avvolgimenti		Y		YY	
Exciter Excitatrice Excitador Excitatrice	brushless rotating exciter design with solid state pivotante sans brosses avec pont de diodes pivotants puente de diodos sin escobillas rotantes rotante senza spazzole con ponte di diodi rotanti				
Poles Poles Polos Poli	4				
Phases Phases Fases Fasi	3 + N				
Wires Fils Hilos Morsetti	12				
Voltage regulation Regulation Voltage Regulación voltaje Regolazione tensione		± 0,5 %			
Waveform distortion Taux d'harmonique Distorción forma de onda Distorsione forma d'onda		IEC		< 2%	
Insulation class Classe d' isolation Classe de aislamiento Classe di isolamento		H			
Enclosure Degré de protection mécanique Grado de protección mecánica Grado di protezione meccanica		IP 23			
Maximun overspeed Survitesse Régimen máximo Velocità di fuga		2250 min			
AVR model with 300% shortcircuit current Modèle AVR avec un courant de court-circuit du 300% Modelo AVR con una corriente de corto circuito del 300% Modello AVR con corrente di corto circuito del 300%		(3 In) : 10s		R 438 AREP	
Derating for temperature Déclassement pour température Declasamiento para temperatura Declassamento per temperatura		0 ÷ 40°C		0	
		> 40 °C		3 % / 5°C	
Derating for altitude Déclassement pour altitude Declasamiento para altitud Declassamento per altitudine		0 ÷ 1500 m		0	
		1500 ÷ 2500 m		3% / 500 m	
		2500 ÷ 3000 m		4% / 500 m	

LOGISTICI INFORMATION INFORMATION LOGISTIQUES INFORMATION LOGISTICA INFORMAZIONI LOGISTICHE							
	Integrated fuel tank capacity Capacité réservoir intégré Capacidad Tanque integrado Capacità Serbatoio integrato			Weight Poids Peso Peso	Dimensions Cotes d'encombrement Medidas externas Dimensioni d'ingombro		
	(L.)			(kg)	(cm)		
	STD	EXTRA1	EXTRA2		L	W	H
SOUND PROOF VERSION VERSION INSONORISEE VERSION INSONORISADA VERSIONE INSONORIZZATA	185	270	ON REQUEST	1220	230	113	171
GENSET STANDARD EQUIPMENT EQUIPEMENT STANDARD GROUPE ELECTROGENE EQUIPAMENTO STANDARD GRUPO ELECTROGENO EQUIPAGGIAMENTO STANDARD GRUPPO ELETTROGENO							
GB	F		E	I			
• Lifting eye • Vibration dampers • Integrated bunded fuel tank • Battery • Manual autostart control panel With DSE7310 • Emergency stop button • Sound proof canopy of galvanized steel with residential silencer • Fork lift guides	• Crochet de levage • Amortisseurs de vibrations • Réservoir intégré avec bac de rétention • Batterie • Coffret de contrôle manuel autostart avec DSE7310 • Bouton arrêt d'urgence • Capote d'insonorisation d'acier galvanisé avec silencieux résidentiel • Supports pour fourches		• Gancho central • Apagadores de vibracion • Tanque combustible integrado con bandeja para la recogida de líquidos • Bateria • Cuadro manual autostart con DSE7310 • Botón parada de emergencia • Cabina de insonorización de acero cincado con silenciador residencial • Supportes para carretilla	• Gancio centrale di sollevamento • Antivibranti • Serbatoio integrato con vasca di raccolta liquidi • Batteria • Quadro manuale autostart con DSE7310 • Pulsante arresto di emergenza • Cabina di insonorizzazione di acciaio zincato con marmitta residenziale • Porta forche			
MANUAL AUTOSTART CONTROL PANEL COFFRET ELECTRIQUE MANUEL AUTOSTART CUADRO ELECTRI CO MANUAL AUTOSTART QUADRO ELETTRICO MANUALE AUTOSTART							
Q 7310 AUS							
100A (400 V - 3 ph - 50Hz - 1500 rpm) 200A (220 V - 3 ph - 60Hz - 1800 rpm)							
STANDARD EQUIPMENT: 4 poles circuit breaker Electronic control board DSE 7310 Control panel box key Emergency Stop button	EQUIPEMENT STANDARD: Disjoncteur de protection 4 pôles Fiche électronique DSE 7310 Clé pour serrure du coffret Interrupteur d'arrêt d'urgence		EQUIPAMENTO STANDARD: Interruptor magnetotermico 4 polos Carta electronica DSE 7310 Llave cuadro Botón de parada de emergencia	EQUIPAGGIAMENTO STANDARD: Interruttore magnetotermico 4 poli Scheda elettronica DSE 7310 Chiave quadro Pulsante di arresto di emergenza			
	CONTROL BOARD CARTE ELECTRONIQUE DE CONTROL CARTA ELETTRONICA DE CONTROL SCHEDA ELETTTRONICA DI CONTROLLO						
PROTECTIONS	PROTECTIONS		PROTECCIONES	PROTEZIONI			
Low oil pressure High engine temperature Low fuel level Fail to start Fail to stop Emergency stop Over/under generator frequency Over/under generator voltage Over/under speed Fuel level Belt breakage Over current Over/under battery voltage	Basse pression huile moteur Haute température moteur Basse niveau combustible Non démarrage Non arrêt Arrêt d'urgence Sur/sous générateur fréquence Sur/sous générateur voltage Sur/sourvitesse Niveau de combustible Rupture courroie Surcourant Sur/sus la tension de batterie		Baja presión aceite Elevada temperatura motor Baja nivel carburante Falta de arranque Falta de parada Parada de emergencia Sobre/bajo generatore frecuencia Sobre/bajo generatore voltaje Sobre/bajo velocidad nivel de combustible Ruptura correa Corriente maxima Sobre/bajo voltaje de la batería	Bassa pressione olio Alta temperatura motore Basso livello di carburante Mancato avviamento Mancato arresto Stop d'emergenza Sovra/sotto frequenza generatore Sovra/sotto voltaggio generatore Sovra/sotto velocità Livello del carburante Rottura cinghia Sovracorrente Sovra/sotto tensione della batteria			
DIGITAL METERS	VOYANT NUMERIQUE POUR		VI SOR DIGITAL PARA	MISURATORE DIGITALE PER			
Generator volts (3 phases) Generator amperes (3 phases) Generator frequency KW-meter kVA-meter Cos φ-meter Rpm meter Gen set hours counter Battery Volts	Voltmètre générateur (3 phases) Ampèremètre générateur (3 phases) Fréquencemètre générateur KW-mètre kVA- mètre Cos φ- mètre Tm mètre Totalisateur d'heures de marche Voltmètre batterie		Voltmetro (3 fases) Amperimetro (3 fases) Frecuencimetro KW- metro kVA- metro Cos φ-metro Revoluciones por minuto metro Medida horas de marcha Voltmetro batería	Voltmetro tensione generatore (3 fasi) Amperometro generatore (3 fasi) Frequenzimetro generatore KW- metro kVA- metro Cos φ-metro Gm metro Contaore di funzionamento gruppo Voltmetro batteria			

AUTOMATIC CONTROL PANEL COFFRET ELECTRIQUE AUTOMATIQUE CUADRO ELECTRI CO AUTOMATICO QUADRO ELETTRI CO AUTOMATI CO				
1)	Q 7320 ATS 	COMPLETE CONTROL PANEL FREE STANDING TYPE Equipment: control board, circuit breaker, battery charger, transfer switch, box key. COFFRET ELECTRIQUE COMPLET TYPE ARMOIRE SEPARÉ DU GROUPE Equipement : carte électronique de contrôle, disjoncteur de protection, chargeur de batterie, inverseur de source, clé coffret. CUADRO ELECTRI CO COMPLETO EN ARMARIO SEPARADO DEL GRUPO Equipamiento: carta electronica de controllo, interruptor magnetotermico, cargador de bateria, transferencial, llave quadro. QUADRO ELETTRI CO COMPLETO SEPARATO DAL GRUPPO Equipaggiamento: scheda elettronica di controllo, interruttore magnetotermico, carica batteria, telecommutazione e chiave quadro.		
2)	Q 7320 AMF 	AMF CONTROL PANEL FITTED ON THE GEN-SET WITHOUT TRANSFER SWITCH Equipment: control board, circuit breaker, battery charger, box key. COFFRET ELECTRIQUE MONTE SUR LE GROUPE SANS INVERSEUR DE SOURCE Equipement : carte électronique de contrôle, disjoncteur de protection, chargeur de batterie, clé coffret. CUADRO ELECTRI CO MONTADO SOBRE EL GRUPO SIN TRANSFERENCIAL Equipamiento: carta electronica de controllo, interruptor magnetotermico, cargador de bateria, llave quadro. QUADRO ELETTRI CO MONTATO SUL GRUPPO ELETTROGENO SENZA TELECOMMUTAZIONE Equipaggiamento: scheda elettronica di controllo, interruttore magnetotermico, carica batteria, chiave quadro.		
3)	Q 7320 STS 	CONTROL PANEL FITTED ON THE GEN-SET WITH TRANSFER SWITCH SUPPLIED IN A SEPARATED BOX Equipment: control board, circuit breaker, battery charger, box key, separate transfer switch. COFFRET ELECTRIQUE MONTE SUR LE GROUPE + INVERSEUR DE SOURCE FOURNI DANS UN COFFRET SEPARÉ Equipement : carte électronique de contrôle, disjoncteur de protection, chargeur de batterie, inverseur de source séparé, clé coffret. CUADRO ELECTRI CO MONTADO SOBRE EL GRUPO CON TRANSFERENCIAL SEPARADO Equipamiento: carta electronica de controllo, interruptor magnetotermico, cargador de bateria, llave quadro, transferencial separado. QUADRO ELETTRI CO MONTATO SUL GRUPPO ELETTROGENO CON TELECOMMUTAZIONE SEPARATA Equipaggiamento: scheda elettronica di controllo, interruttore magnetotermico, carica batteria, chiave quadro, telecommutazione in armadio separato.		
		CONTROL BOARD CARTE ELECTRONIQUE DE CONTROL CARTA ELECTRONICA DE CONTROL SCHEDA ELETTRONICA DI CONTROLLO		
GB		F	E	I
The DSE7320 is an Automatic Mains Failure Control Module designed to automatically start and stop diesel generating sets that include electronic and non electronic engines. The module also provides excellent genset monitoring and protection features.		La DSE7320 est une carte de contrôle projetée pour démarrer et arrêter automatiquement groupes électrogènes diesel avec moteurs électroniques et non électroniques. La carte représente un système excellent de contrôle et de protection du groupe électrogène.	La DSE7320 es una carta de control para arrancar y parar automáticamente grupos electrógenos diesel con motores electrónicos y no electrónicos. La carta constituye un excelente sistema de control y protección del grupo electrógeno.	La DSE7320 è una scheda di controllo progettata per avviare e arrestare automaticamente gruppi elettrogeni diesel con motori elettronici e non elettronici. La scheda costituisce un eccellente sistema di controllo e di protezione del gruppo elettrogeno.
FEATURES		EQUIPEMENT	EQUIPMENT	EQUIPAGGIAMENTO
Stop/restart – Auto – Manual – Start LCD display scroll Event log view Acoustic alarm		Fiche électronique de contrôle DSE7320 Disjoncteur de protection Chargeur de batterie Bouton poussoir arrête d’urgence	Ficha electrónica de control DSE7320 Interruputor magnetotermico Cargador de batería Boton de parada de emergencia	Scheda elettronica di controllo DSE7320 Interruttore magnetotermico Carica batteria Pulsante stop emergenza
DIGITAL MEASURING		MESURES NUMERIQUES	MEDIDAS DIGITALES	MISURAZIONI DIGITALI
Generator volts (3 phases) Generator amperes (3 phases) Generator frequency KW-meter kVA-meter Cos φ- meter Rpm meter Water temperature (optional) Oil pressure (optional) Gen set hours counter Mains volts Battery volts Mains frequency Charging voltage Start-counter Fuel level %		Voltmètre générateur (3 phases) Ampèremètre générateur (3 phases) Fréquencemètre générateur KW- mètre kVA- mètre Cos φ- mètre Tm mètre Température eau (facultatif) Pression huile (facultatif) Totalisateur d’heures de marche Voltmètre secteur Voltmètre batterie Fréquence réseau Tension de charge Compteur démarrages Niveau combustible %	Voltmetro (3 fases) Amperimetro (3 fases) Frecuencimetro KW- metro kVA- metro Cos φ- metro Revoluciones por minuto metro Termometro agua (opcional) Presión aceite (opcional) Medida horas de marcha Voltmetro tensión de red Voltmetro batería Frecuencia red Tensión de carga Numero de arranques Nivel carburante %	Voltmetro tensione generatore (3 fasi) Amperometro generatore (3 fasi) Frequenzimetro generatore KW- metro kVA- metro Cos φ- metro Gm metro Temperatura acqua (facoltativo) Pressione olio (facoltativo) Contaore di funzionamento gruppo Voltmetro tensione rete Voltmetro batteria Frequenza rete Tensione di carica Contavviamenti Livello carburante %
INDICATORS		INDICATEURS	INDICADORES	INDICATORI
Mains live Generator live Mains contactor closed Generator contactor closed Engine running		Présence secteur Présence tension générateur Inverseur secteur fermé Inverseur générateur fermé Moteur en marche	Presencia tensión de red Presencia tensión grupo Transferencial red cerrado Transferencial grupo cerrado Motor en marcha	Presenza tensione di rete Presenza tensione generatore Erogazione da rete Erogazione da gruppo Motore avviato
PROTECTIONS		PROTECTIONS	PROTECCIONES	PROTEZIONI
Low oil pressure High engine temperature Low fuel level Fail to start Fail to stop Emergency stop Over/under frequency Over/under voltage Over/under speed Fuel level Belt breakage Over current Over/under battery voltage		Bas pression huile moteur Haute température moteur Bas niveau combustible Non démarrage Non arrêt Arrêt d’urgence Sur/sous fréquence Sur/sous voltage Sur/sous vitesse Niveau de combustible Rupture courroie Surcourant Sur/sus la tension de batterie	Baja presión aceite Elevada temperatura motor Baja nivel carburante Falta de arranque Falta de parada Parada de emergencia Sobre/bajo frecuencia Sobre/bajo voltaje Sobre/bajo velocidad nivel de combustible Ruptura correa Corriente maxima Sobre/bajo voltaie de la batería	Bassa pressione olio Alta temperatura motore Basso livello di carburante Mancato avviamento Mancato arresto Stop d’emergenza Sovra/sotto frequenza Sovra/sotto voltaggio Sovra/sotto velocità Livello del carburante Rottura cinghia Sovracorrente Sovra/sotto tensione della batteria

SOUNDPROOF CANOPY CAPOTE D'INSONORISATION CAPOTA DE INSONORIZACION CABINA INSONORIZZATA			
GB	F	E	I
The Bruno Super Silent soundproof canopy has been designed with the aim of achieving the maximum noise level reduction and to provide a perfect cooling of the engine. The cooling airflow is forced through fixed circuits. The canopy is suitable for tropical ambient application. The exhaust gas silencer is residential type internally mounted. The canopy is completely built of hot galvanized carbon sheet steel. The sheets have a thickness 20/10. The structure is fully bolted, fixed by a special polyethylene sealing, completely free from electrical installation. All the panels can be easily removed. The cab is provided with doors of wide opening for easy access to generating set for the maintenance operations. The soundproofing materials are highly fire resistant and self-extinguishing.	La capote insonorisée Bruno Super Silent à été conçue pour atteindre le niveau de bruit le mineur possible et un refroidissement du moteur parfait. Le soufflé d'air refroidissant est canalisé en circuits fixes. La capote est apte à être utilisée dans les ambiances tropicales. Le silencieux des gaz d'échappement, de type résidentiel, est mis à l'intérieur de la capote. La cabine est construite en acier galvanisé à chaud. Les tôles ont une épaisseur de 20/10. La structure est complètement boulonnée et fixée à travers des garnitures spéciales au polyéthylène. Tous les panneaux sont facilement amovibles. La cabine est dotée de portes avec grandes ouvertures qui permettent un accès facile au groupe électrogène pour les opérations de manutention. Les matériaux d'insonorisation sont fortement résistants au feu et auto-extinguibles.	La capota insonorizada Bruno Super Silent tiene sido planeada con el objetivo de alcanzar el menor nivel de rumorosidad posible y un perfecto enfriamiento del motor. El sople de aire es canalizado en circuitos fijos. La cabina es apta a ser utilizada en ambientes tropicales. El silenciador de los gases de descargue, de tipo residencial, es colocado dentro de la cabina. La cabina es construida en acero cincado. Las chapas tienen un espesor de 20/10. La estructura es completamente bullonada y montada con sellos especiales de polietilene. Todos los paneles son fácilmente removibles. La cabina es dotada con puertas con amplias aberturas que permiten el fácil acceso al grupo electrógeno por las operaciones de manutención. Los materiales insonorizantes son muy resistentes al fuego y auto-extinguentes.	La cabina insonorizzata Bruno Super Silent è stata progettata allo scopo di raggiungere il minor livello di rumorosità possibile e un perfetto raffreddamento del motore. Il soffio d'aria raffreddante è canalizzato in circuiti fissi. La cabina è adatta ad essere utilizzata in ambienti tropicali. Il silenziatore dei gas di scarico, di tipo residenziale, è collocato all'interno della cabina. La cabina è costruita in acciaio zincato a caldo. Le lamiere hanno uno spessore di 20/10. La struttura è completamente bullonata e fissata tramite speciali sigilli al polietilene. Tutti i pannelli sono facilmente rimovibili. La cabina è dotata di porte con ampie aperture che consentono il facile accesso al gruppo elettrogeno per le operazioni di manutenzione. I materiali insonorizzanti sono altamente resistenti al fuoco e autoestinguenti.
Our quality in 13 points Notre qualité résumée en 13 points Nuestra calidad en 13 puntos La nostra qualità in 13 punti			
1	Internal residential silencer for lower sound levels Silencieux interne pour un niveau bas de bruit Silenciador interno para un nivel de rumorosidad más bajo Silenziatore interno per un livello di rumorosità più basso		
2	Integrated fuel tank of different sizes Réservoirs de combustible disponibles, sur demande, de capacité supérieure Tanques integrados disponibles, como opción, de capacidad superior Serbatoi integrati disponibili, su richiesta, di capacità superiore		
3	Control panel viewing window to easily check status of generating set Fenêtre de visualisation du panneau de contrôle pour un contrôle plus facile du status opérationnel du groupe Ventana de visualización del panel de control por un más fácil control del estatus operativo del grupo Finestra di visualizzazione del pannello di controllo per un più facile controllo dello status operativo del gruppo		
4	Lockable access doors for extra safety and security Porte d'accès avec serrure pour une sûreté majeure Puertas de acceso con cerradura para una mayor seguridad Porte di accesso con serratura per una maggiore sicurezza		
5	Galvanized bolts Boulons galvanisés Pernos cincados Bulloni zincati		
6	Emergency stop button Interrupteur d'arrêt d'urgence Botón parada de emergencia Pulsante arresto di emergenza		
7	Fuel tank cap with external key Bouchon gasoil avec clé positionne a l'extérieur Tapo gasoleo con llave situado a l'externo Tappo gasolio con chiave posizionato all'esterno		
8	Fully banded baase frame Réservoir amovible avec bague de retention Tanque integrado sfilable con el envase para recoger los líquidos Serbatoio integrato sfilabile con vasca raccolta liquidi		
9	Central lifting hook Crochet central d'enlèvement Gancho de elevación Gancio di sollevamento centrale		
10	Doors location convenient to controls and service area Placement des portes pour rendre les contrôles plus faciles Colocación de las puertas para facilitar los controles Collocazione delle porte per facilitare i controlli		
11	High serviceability level Haut niveau d'accessibilité pour la manutention Alto nivel de accesibilidad para la manutención Alto livello di accessibilità per la manutenzione		
12	Large cable entry area for easy installation Grande zone d'entrée des câbles pour une installation plus facile Amplia área de entrada cables para una instalación fácil Ampia area di entrata cavi per una facile installazione		
13	Galvanized metal steel sheet pre-treated prior to powder coating Tôles en acier galvanisé pré-traitées avant le vernissage à poudre Chapas de acero cincado pre-tratadas antes de la pintura a polvo Lamiere di acciaio zincato pre-trattate prima della verniciatura a polvere		

1100 Series 1103A-33TG2 Diesel Engine – Electropak

59.3 kWm at 1500 rpm
67.5 kWm at 1800 rpm

Building upon Perkins proven reputation within the power generation industry, the 1100 Series range of Electropak engines now fit even closer to customers needs.

In the world of power generation success is only gained by providing more for less. With the 1103A-33TG2 Perkins has engineered even higher levels of reliability, yet lowered the cost of ownership.

1100A units are designed for territories that do not require compliance to EPA or EU emissions legislation. These units are able to meet TA luft legislation.

Compact, efficient power

- 1100 Series is the result of an intensive period of customer research that has guided the development of the range
- The new 3.3 litre cylinder block ensures bore roundness is maintained under the pressures of operation. It also ensures combustion and mechanical noise is lowered
- A new cylinder head has re-established Perkins mastery of air control

Quality by design

- Product design and Class A manufacturing improvements enhance product reliability while maintaining Perkins legendary reputation for durability

Cost effective power

- Compact size and low noise
- Lower fuel consumption and oil use
- 500 hour service intervals
- 2 year warranty

Product support

- Perkins actively pursues product support excellence by ensuring our distribution network invest in their territory – strengthening relationships and providing more value to you, our customer
- Through an experienced global network of distributors and dealers, fully trained engine experts deliver total service support around the clock, 365 days a year. They have a comprehensive suite of web based tools at their fingertips covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts and service. We give 100% reassurance that you receive the very best in terms of quality for lowest possible cost .. wherever your Perkins powered machine is operating in the world



Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	60.0	48.0	55.0	73.8	53.8	72.1
	Standby Power	66.0	52.8	60.5	81.1	59.3	79.5
1800	Prime Power	68.1	54.5	63.3	84.9	61.2	82.1
	Standby Power	75.1	60.1	69.6	93.3	67.5	90.5

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1. Derating may be required for conditions outside these; consult Perkins Engines Company Limited.

Generator powers are typical and are based on an average alternator efficiency and a power factor (cos. θ) of 0.8. Fuel specification: BS 2869: Part 2 1998 Class A2 or DIN EN 590. Lubricating oil: 15W40 to API CG4.

Rating Definitions

Prime Power: Variable load. Unlimited hours usage with an average load factor of 80% of the published prime power over each 24 hour period. A 10% overload is available for 1 hour in every 12 hours of operation. **Standby Power:** Variable load. Limited to 500 hours annual usage, up to 300 hours of which may be continuous running. No overload is permitted.

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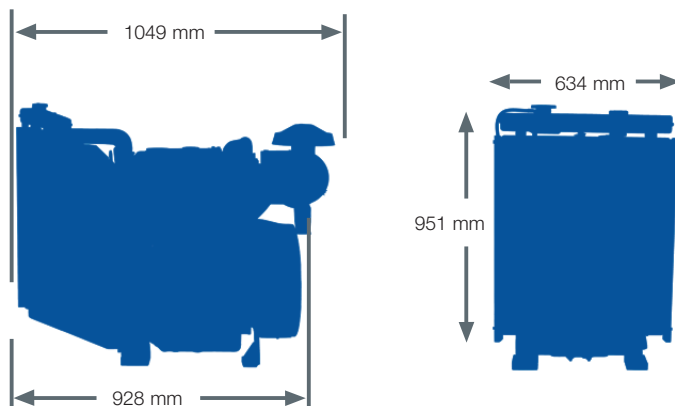
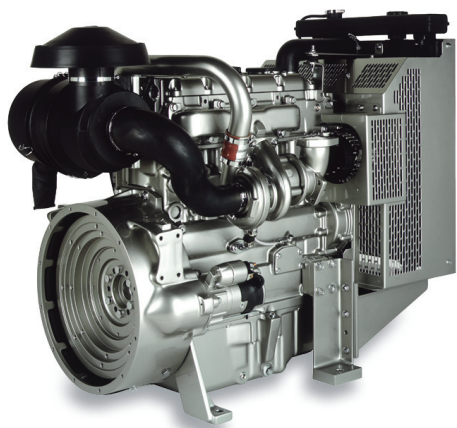
 **Perkins®**

THE HEART OF EVERY GREAT MACHINE

1100 Series 1103A-33TG2 Diesel Engine – Electropak

59.3 kWm at 1500 rpm

67.5 kWm at 1800 rpm



Standard Electropak specification

Air inlet

- Mounted air filter

Fuel system

- Rotary type pump
- Ecoplus fuel filter

Lubrication system

- Wet sump with filler and dipstick
- Spin-on oil filter

Cooling system

- Thermostatically controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping

Electrical equipment

- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run

Flywheel and housing

- High inertia flywheel to SAE J620 Size 10/11½
- SAE 3 flywheel housing

Mountings

- Front engine mounting bracket

Literature

- User's Handbook

Optional equipment

- Woodward electronic governor (LCG2)
- Workshop manual
- Parts book

Option groups

A selection of optional items is available to enable the customer to prepare a specification precisely matched to the needs.

Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	UK g/hr	l/hr	UK g/hr	l/hr
Standby	3.3	15.4	4.0	18.2
Prime Power	3.0	13.9	3.6	16.6
75% of Prime Power	2.2	10.4	2.7	12.5
50% of Prime Power	1.5	7.2	1.9	8.8

General data

Number of cylinders 3 vertical in-line
Bore and stroke.....105 x 127 mm
Displacement 3.3 litres
Aspiration Turbocharged
Cycle.....4 stroke
Combustion system.....Direct injection
Compression ratio 17.25:1
Rotation.....Anti-clockwise viewed from flywheel
Cooling system.....Water-cooled
Total lubrication system capacity..... 7.9 litres
Total coolant capacity 10.2 litres
Dimensions – Length 1049 mm
Width 634 mm
Height 951 mm
Dry weight (approx)..... 420 kg

Final weight and dimensions will depend on completed specification

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THE HEART OF EVERY GREAT MACHINE



Low Voltage alternators - 4 pole LSA 42.3

25 to 60 kVA - 50 Hz / 31.5 to 75 kVA - 60 Hz

Electrical and mechanical data

4802 en - 2014.01 / e

Low Voltage alternators 4 pole 3-phase *PARTNER*

LSA 42.3

25 to 60 kVA - 50 Hz / 31.5 to 75 kVA - 60 Hz

SPECIALLY ADAPTED TO APPLICATIONS

The LSA 42.3 alternator is designed to be suitable for typical generator applications, such as: backup, marine applications, rental, telecommunications, etc.

COMPLIANT WITH INTERNATIONAL STANDARDS

The LSA 42.3 alternator conforms to the main international standards and regulations:

- IEC 60034, NEMA MG 1.22, ISO 8528-3, CSA / UL on request, marine regulations, etc.

It can be integrated into a CE marked generator.

The LSA 42.3 is designed, manufactured and marketed in an ISO 9001 environment and ISO 14001.

TOP OF THE RANGE ELECTRICAL PERFORMANCE

- Class H insulation.
- Standard 12 wire re-connectable winding, 2/3 pitch, type no. 6.
- Voltage range:
 - 50 Hz: 220 V - 240 V and 380 V - 415 V (440 V)
 - 60 Hz: 208 V - 240 V and 380 V - 480 V
- High efficiency and motor starting capacity.
- Other voltages are possible with optional adapted windings:
 - 50 Hz: 440 V (no. 7), 500 V (no. 9), 690 V (n°10)
 - 60 Hz: 380 V and 416 V (no. 8), 600 V (no. 9)
- R 791 interference suppression conforming to standard EN 55011 group 1 class B standard for European zone (CE marking).

REINFORCED MECHANICAL STRUCTURE USING FINITE ELEMENT MODELLING

- Compact rigid assembly to better withstand generator vibrations.
- Steel frame.
- Aluminium flanges and shields.
- Two-bearing and single-bearing versions designed to be suitable for commercially-available heat engines.
- Half-key balancing two bearing.
- Permanently greased bearings (20 000h).
- Direction of rotation : clockwise and anti-clockwise (without derating).

EXCITATION AND REGULATION SYSTEM SUITED TO THE APPLICATION

Excitation system				Regulation options				
Voltage regulator	SHUNT	AREP	PMG	Current transformer for paralleling	Mains paralleling	3-phase sensing	3-phase sensing for mains paralleling unbalanced	Remote voltage potentiometer
R220	Std	-	-	-	-	-	-	-
R438	-	Std	Std	C.T.	R726*	R731*	R734*	√
R450	Option	Option	Option	C.T.	R726*	R731*	R734*	√
D510C*	Option	Option	Option	C.T.	included	included	contacter factory	√

* Steel terminal box mounting only

√: Possible mounting

COMPACT AND DESIGN TERMINAL BOX

- Easy access to the AVR (lid) and to the connections.
- 8 way terminal block for reconnecting the voltage.
- Predrilled holes for cable gland.
- Steel terminal box in option.

PROTECTION SYSTEM SUITED TO THE ENVIRONMENT

- The LSA 42.3 is IP 23.
- Standard winding protection for clean environments with relative humidity $\leq 95\%$, including indoor marine environments.
- Options:
 - filters on air inlet : derating 5%,
 - filters on air inlet and air outlet (IP 44) : derating 10%,
 - winding protection for harsh environments and relative humidity greater than 95%,
 - space heaters,
 - thermal protection for stator windings,
 - height fixing : H = 225 mm (option) with the order.



Low Voltage alternators 4 pole 3-phase *PARTNER*

LSA 42.3

25 to 60 kVA - 50 Hz / 31.5 to 75 kVA - 60 Hz

General characteristics

Insulation class	H	Excitation system	SHUNT	AREP or PMG
Winding pitch	2/3 (wdg 6)	AVR type	R 220	R 438
Number of wires	12	Voltage regulation (*)	± 0.5 %	± 0.5 %
Protection	IP 23	Short-circuit current	-	300% (3 IN): 10 s
Altitude	≤ 1000 m	Totale Harmonic distortion THD (**) in no-load : < 2% according to IEC		
Overspeed	2250 min ⁻¹	Totale Harmonic distortion THD (**) on linear load : < 4% according to IEC		
Air flow	0.10m ³ /s, 50 Hz - 0.13m ³ /s, 60 Hz	Waveform: NEMA = TIF (**) < 50		

(*) Steady state. (**) Total harmonic distortion between phases, no-load or on-load (non-distorting).

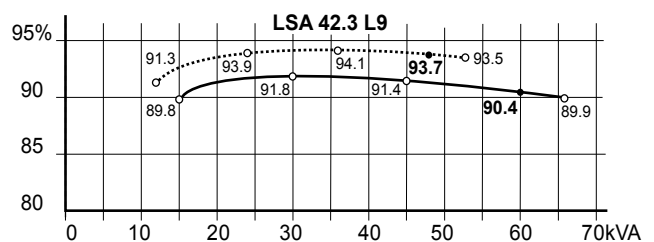
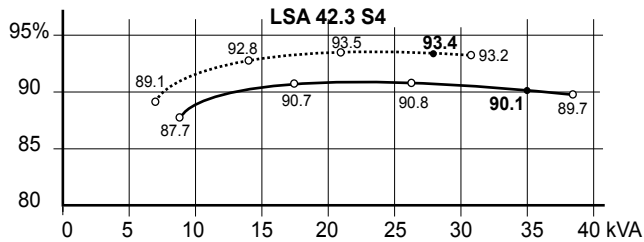
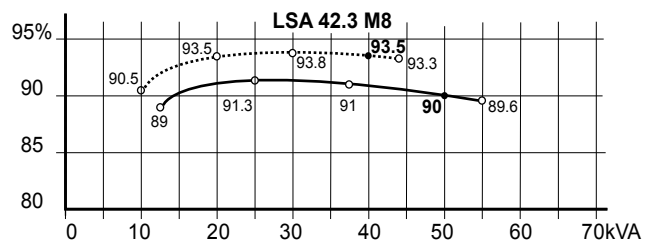
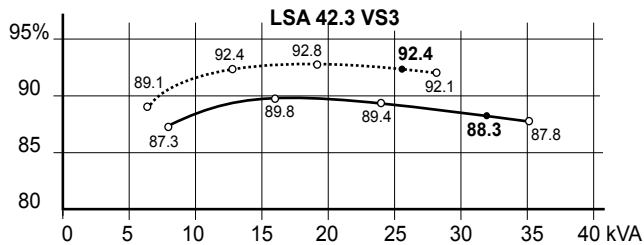
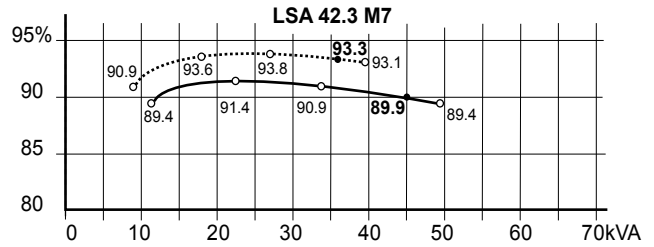
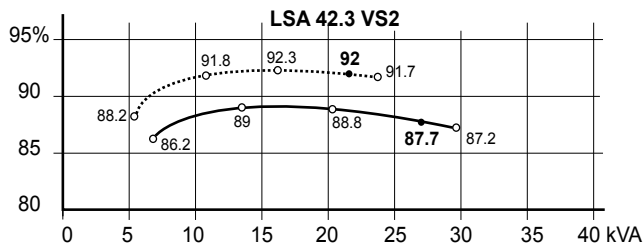
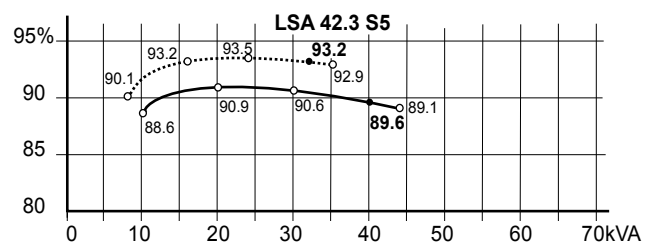
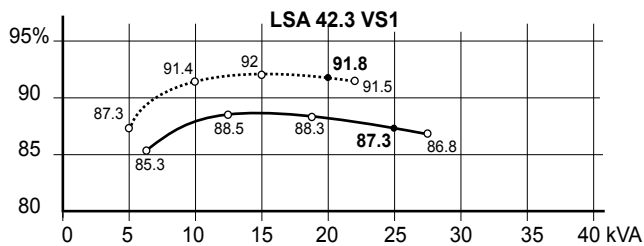
Ratings 50 Hz - 1500 R.P.M.

kVA / kW - P.F. = 0.8																					
Duty/T°C		Continuous duty/40°C					Continuous duty/40°C					Stand-by/40°C					Stand-by/27°C				
Class/T°K		H/125°K					F/105°K					H/150°K					H/163°K				
Phase		3 ph.			1 ph.		3 ph.			1 ph.		3 ph.			1 ph.		3 ph.			1 ph.	
Y		380V	400V	415V	440V	ΔΔ	380V	400V	415V	440V	ΔΔ	380V	400V	415V	440V	ΔΔ	380V	400V	415V	440V	ΔΔ
Δ		220V	230V	240V	230V		220V	230V	240V	230V		220V	230V	240V	230V		220V	230V	240V	230V	
YY					220V				220V				220V				220V				220V
42.3 VS1	kVA	25			24.5	15	22.8			22.3	13.7	26.5			26	15.9	27.5			27	16.5
	kW	20			19.6	12	18.2			17.9	10.9	21.2			20.8	12.7	22			21.6	13.2
42.3 VS2	kVA	27			26	16.2	24.6			23.6	14.7	28.9			27.6	17.3	30			28	18
	kW	21.6			20.8	13	19.7			18.9	11.8	23.1			22.1	13.9	24			22.9	14.4
42.3 VS3	kVA	32			30	19.2	29.1			27.3	17.5	34			31.8	20.4	35.2			33.0	21.1
	kW	25.6			24	15.4	23.3			21.8	14	27.1			25.4	16.3	28.2			26.4	16.9
42.3 S4	kVA	35			30.6	22	32			27.9	20	37.1			32.5	23.3	38.5			33.7	24.2
	kW	28			24.5	17.6	25.5			22.3	16	29.7			26	18.7	30.8			27.0	19.4
42.3 S5	kVA	40			35	25	36.4			31.9	22.8	42.4			37.1	26.5	45			38.5	28.1
	kW	32			28	20	29.1			25.5	18.2	33.9			29.7	21.2	36			30.8	22.5
42.3 M7	kVA	45			39	27	41			35.5	24.6	48.2			41.3	28.9	50			42.9	30
	kW	36			31.2	21.6	32.8			28.4	19.7	38.5			33.1	23.1	40			34.3	24
42.3 M8	kVA	50			43	30	45.5			39.1	27.3	53			45.6	31.8	55			47.3	33
	kW	40			34.4	24	36.4			31.3	21.8	42.4			36.5	25.4	44			37.8	26.4
42.3 L9	kVA	60			51.6	36	54.6			47.0	32.8	63.6			54.7	38.2	66			56.8	40
	kW	48			41.3	28.8	43.7			37.6	26.2	50.9			43.8	30.5	52.8			45.4	32

Ratings 60 Hz - 1800 R.P.M.

kVA / kW - P.F. = 0.8																							
Duty/T°C		Continuous duty/40°C						Continuous duty/40°C						Stand-by/40°C					Stand-by/27°C				
Class/T°K		H/125°K						F/105°K						H/150°K					H/163°K				
Phase		3 ph.			1 ph.			3 ph.			1 ph.			3 ph.			1 ph.		3 ph.			1 ph.	
Y		380V	416V	440V	480V	ΔΔ	380V	416V	440V	480V	ΔΔ	380V	416V	440V	480V	ΔΔ	380V	416V	440V	480V	ΔΔ		
Δ		220V	240V			240V	220V	240V			240V	220V	240V			240V	220V	240V			240V		
YY			208V	220V	240V			208V	220V	240V			208V	220V	240V			208V	220V	240V			
42.3 VS1	kVA	29.1	31.3	31.5	31.5	18.9	26.5	28.4	28.7	28.7	17,2	30.8	33.1	33.4	33.4	19,8	32	34.4	34.7	34.7	20,8		
	kW	23.3	25	25.2	25.2	15.1	21.2	22.8	22.9	22.9	13,7	24.7	26.5	26.7	26.7	15,9	25.6	27.5	27.7	27.7	16,6		
42.3 VS2	kVA	29.9	31.9	33.8	33.8	19.2	26.9	29	30.7	30.7	17,5	31.4	33.8	35.8	35.8	20,2	32.5	35.1	37.5	37.5	21,1		
	kW	23.7	25.5	27	27	15.4	21.5	23.2	24.6	24.6	14,0	25.1	27.1	28.6	28.6	16,2	26	28.1	30	30	16,9		
42.3 VS3	kVA	34.5	38	40	40	22.8	31.4	34.6	36.4	36.4	20,7	36.6	40.3	42.4	42.4	23,9	38	41.8	44	44	25,1		
	kW	27.6	30.4	32	32	18.2	25.1	27.7	29.1	29.1	16,6	29.3	32.2	33.9	33.9	19,1	30.4	33.4	35.2	35.2	20,0		
42.3 S4	kVA	37.5	40.3	42.9	43.8	24.2	33.4	36.6	39.0	39.8	22,0	39	42.7	45.4	46.4	25,4	40.4	44.3	47.2	48.1	26,6		
	kW	30	32.2	34.3	35	19.3	26.8	29.3	31.2	31.9	17,6	31.2	34.1	36.4	37.1	20,3	32.3	35.4	37.7	38.5	21,2		
42.3 S5	kVA	42	46	49	50	27.6	38.2	41.9	44.6	45.5	25,1	44.5	50	51.9	53	29,0	46.2	50.6	53.9	55	30,4		
	kW	33.6	36.8	39.2	40	22.1	30.6	33.5	35.7	36.4	20,1	35.6	40	41.6	42.4	23,2	37	40.5	43.1	44	24,3		
42.3 M7	kVA	46	50	53.5	56.5	30	41.9	45.5	48.7	51.4	27,3	48.8	53	56.7	59.9	31,5	50.6	55	58.9	62.5	33,0		
	kW	36.8	40	42.8	45.2	24	33.5	36.4	38.9	41.1	21,8	39	42.4	45.4	47.9	25,2	40.5	44	47.1	50	26,4		
42.3 M8	kVA	51.5	56.5	59.5	62.5	33.9	46.9	51.4	54.1	57	30,8	54.6	60	63.1	66.3	35,6	56.7	62.5	65.5	68.8	37,3		
	kW	41.2	45.2	47.6	50	27.1	37.5	41.1	43.3	45.5	24,7	43.7	48	50.5	53	28,5	45.3	50	52.4	55	29,8		
42.3 L9	kVA	59	65	69	75	39	53.7	59.2	62.8	68.3	35,5	62.5	68.9	73.1	79.5	41,0	64.9	71.5	75.9	82.5	42,9		
	kW	47.2	52.0	55.2	60	31.2	43.0	47.3	50.2	54.6	28,4	50.0	55.1	58.5	63.6	32,8	51.9	57.2	60.7	66.0	34,3		

Efficiencies 50 Hz (— P.F.: 0.8) (..... P.F.: 1)



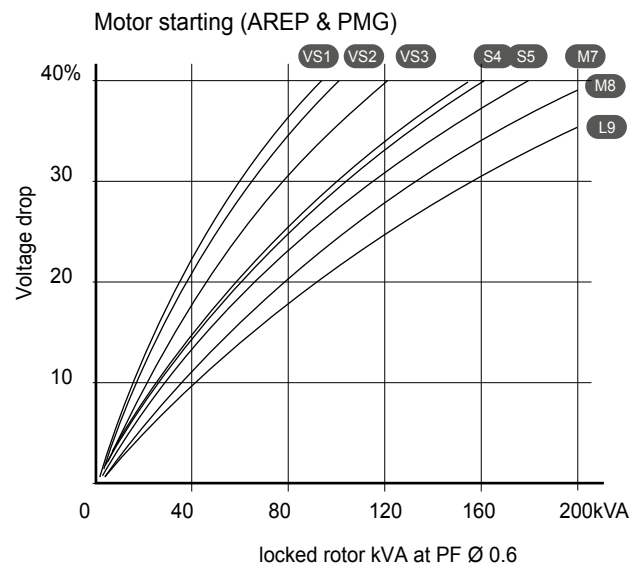
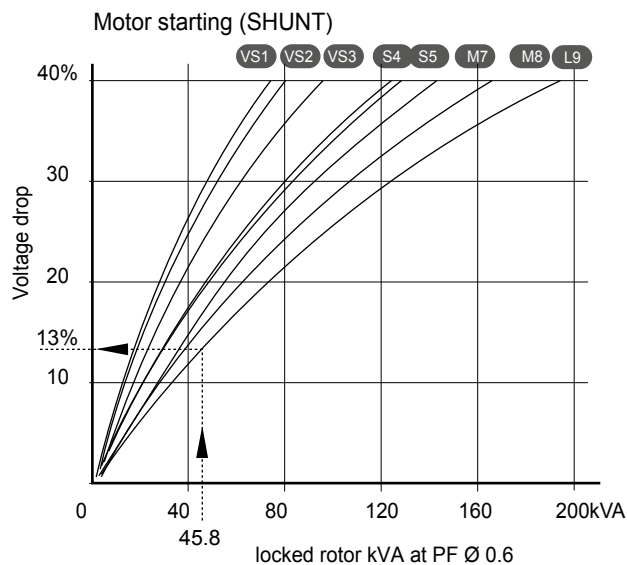
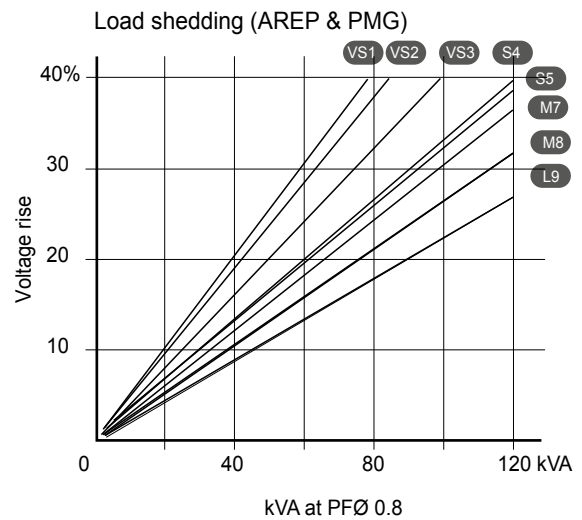
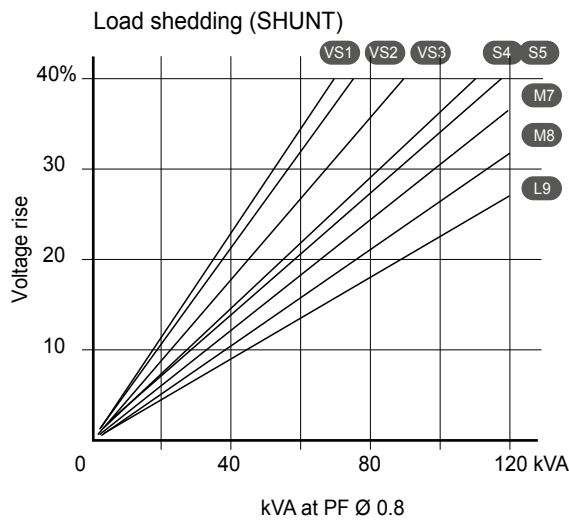
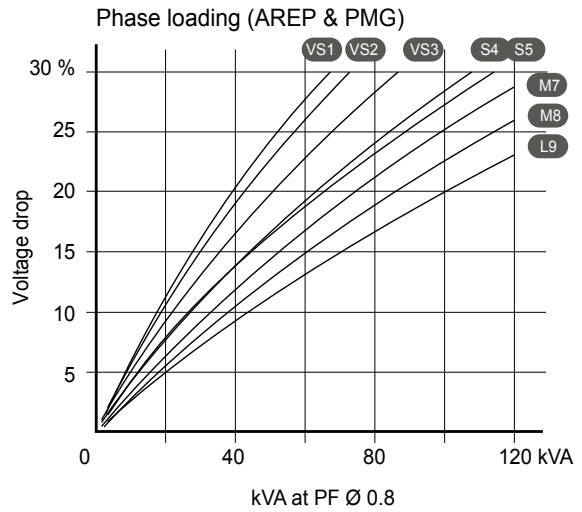
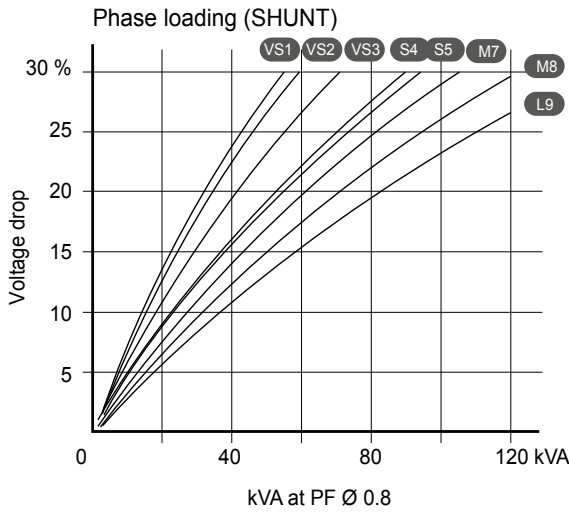
Reactances (%). Time constants (ms) - Class H / 400 V

		VS1	VS2	VS3	S4	S5	M7	M8	L9
Kcc	Short-circuit ratio	0.54	0.51	0.48	0.53	0.46	0.43	0.47	0.44
Xd	Direct-axis synchro. reactance unsaturated	240	249	261	229	262	275	264	283
Xq	Quadrature-axis synchro. reactance unsaturated	144	149	156	137	157	165	158	169
T'do	No-load transient time constant	733	759	803	880	880	914	931	962
X'd	Direct-axis transient reactance saturated	16.3	16.4	16.2	13.0	14.8	15.0	14.1	14.7
T'd	Short-circuit transient time constant	50	50	50	50	50	50	50	50
X''d	Direct-axis subtransient reactance saturated	8.1	8.2	8.1	6.5	7.4	7.5	7.0	7.3
T''d	Subtransient time constant	5	5	5	5	5	5	5	5
X''q	Quadrature-axis subtransient reactance saturated	11.5	11.6	11.5	9.2	10.6	10.7	10.1	10.5
Xo	Zero sequence reactance unsaturated	0.78	0.46	0.88	0.73	0.23	0.25	0.84	0.43
X2	Negative sequence reactance saturated	9.88	9.91	9.82	7.89	9.02	9.12	8.61	8.93
Ta	Armature time constant	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0

Other class H/400 V data

io (A)	No-load excitation current (SHUNT/AREP)	0.55/0.85	0.52/0.8	0.51/0.79	0.49/0.75	0.49/0.75	0.46/0.71	0.5/0.78	0.5/0.77
ic (A)	On-load excitation current (SHUNT/AREP)	1.74/2.66	1.72/2.63	1.77/2.71	1.54/2.36	1.73/2.66	1.75/2.68	1.86/2.86	2.04/3.13
uc (V)	On-load excitation voltage (SHUNT/AREP)	29.6/19.2	29.2/18.9	29.9/19.3	26/16.8	29.1/18.8	29/18.8	30.6/19.8	32.8/21.2
ms	Response time ($\Delta U = 20\%$ transient)	< 500ms	< 500ms	< 500ms	< 500ms	< 500ms	< 500ms	< 500ms	< 500ms
kVA	Start ($\Delta U = 20\%$ cont. or ($\Delta U = 30\%$ trans.) SHUNT	51.7	56	67.7	92	92	103.5	115	138
kVA	Start ($\Delta U = 20\%$ cont. or ($\Delta U = 30\%$ trans.) AREP	59.6	64.3	76.1	93.1	93.1	103.2	104.9	116.8
%	Transient ΔU (on-load 4/4) SHUNT - P.F.: 0.8 _{LAG}	16.3	16.3	16.2	14.3	15.4	15.5	15	15.3
%	Transient ΔU (on-load 4/4) AREP - P.F.: 0.8 _{LAG}	13.8	13.8	13.7	12.2	13.1	13.2	12.8	13
W	No-load losses	719	713	762	861	861	879	1029	1120
W	Heat dissipation	2894	3017	3371	3055	3704	4022	4396	5091

Transient voltage variation 400V - 50 Hz



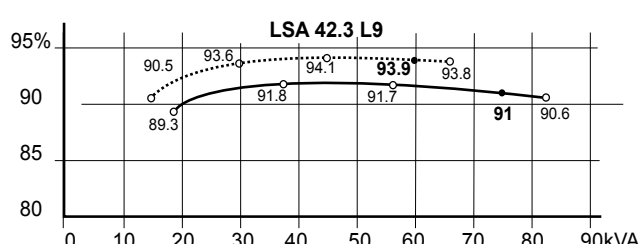
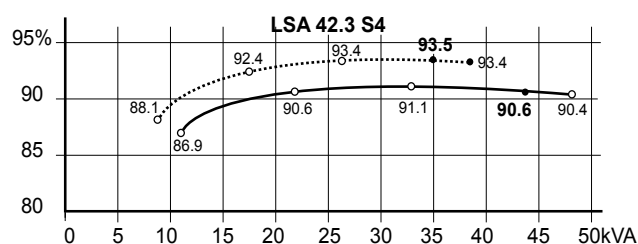
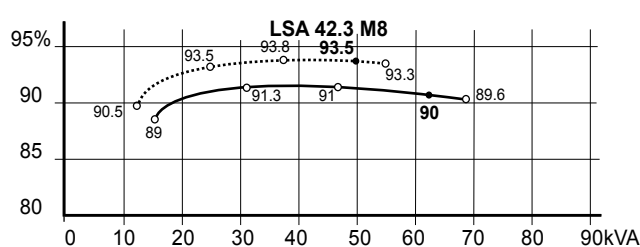
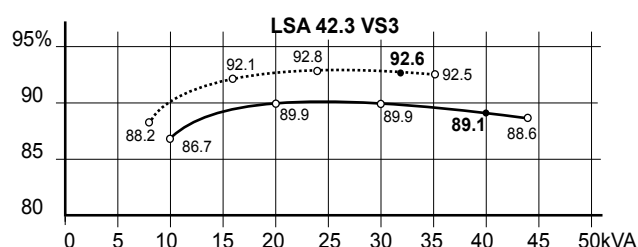
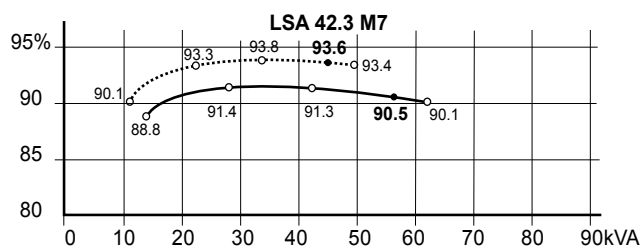
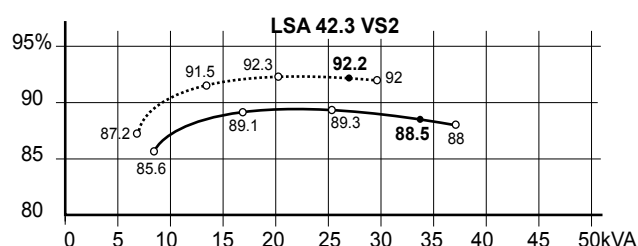
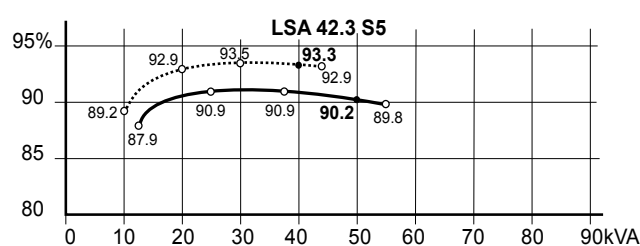
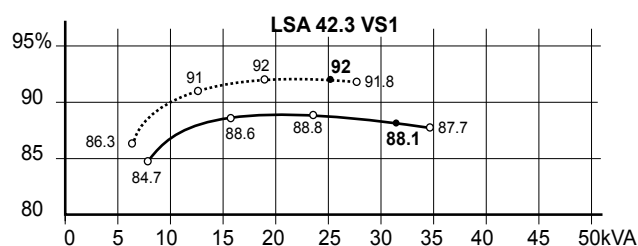
1) For a PF with a $\cos \phi$ other than 0.6, multiply the kVA by $K = \sin \phi / 0.8$

Example of calculation for a PF with a $\cos \phi$ other than 0.6: motor starting kVA calculated at PF $\cos \phi = 0.4 = 40$ kVA

► $\sin \phi = 0.4 = 0.9165$ ► $K = 1.145$ ► corrected kVA = 45.8 kVA ► Corresponding voltage drop for L9 = 13 %.

2) For a voltage U other than 400 V (Y), 230 V () at 50 Hz, multiply the kVA by $(400/U)^2$ or $(230/U)^2$.

Efficiencies 60 Hz (— P.F.: 0.8) (..... P.F.: 1)



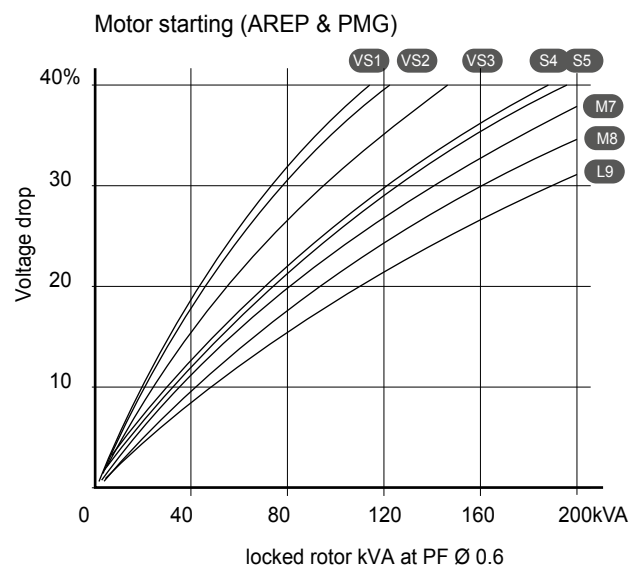
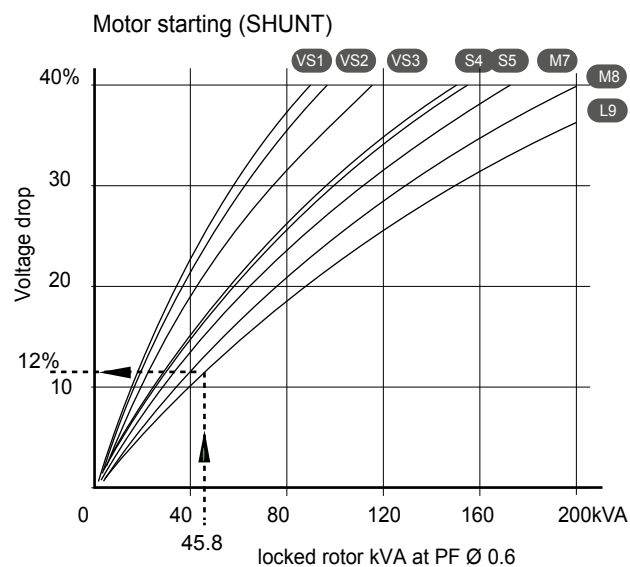
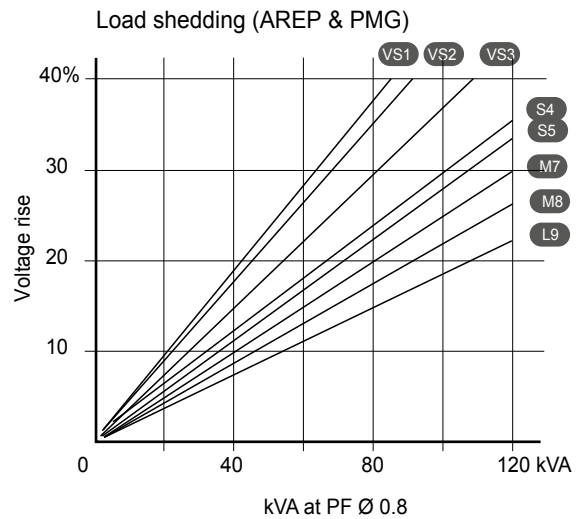
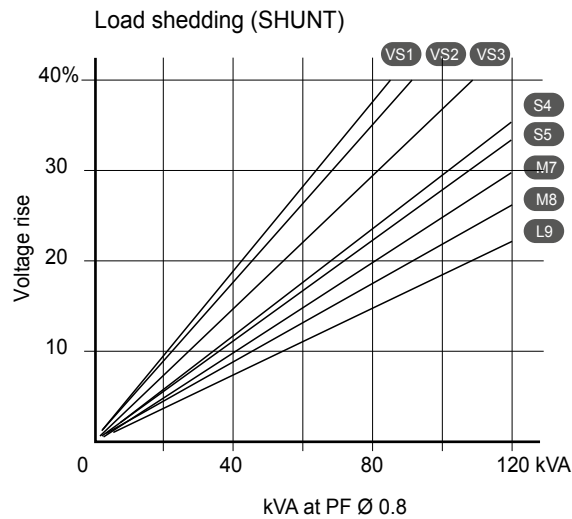
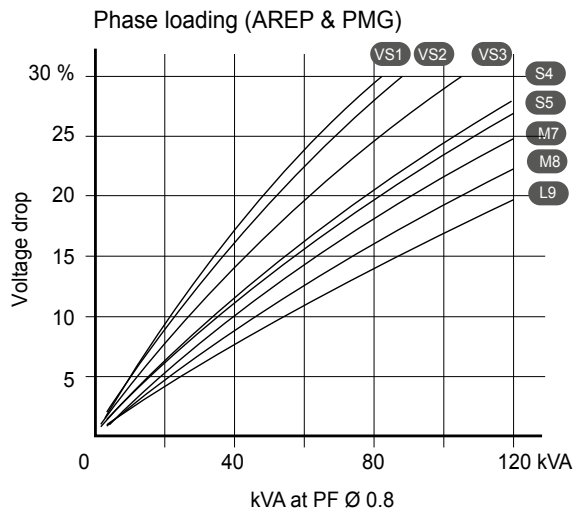
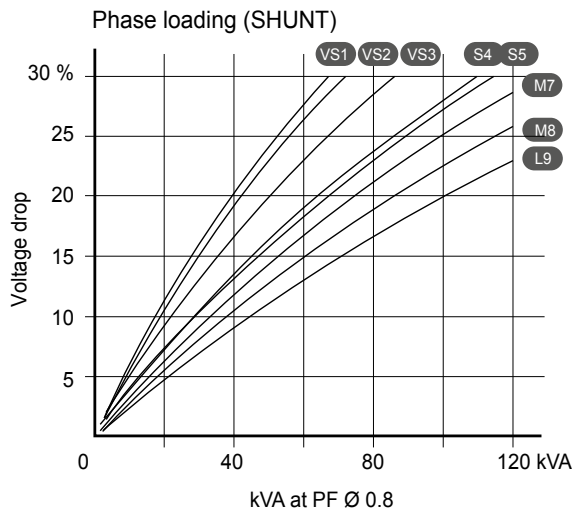
Reactances (%). Time constants (ms) - Class H / 480 V

		VS1	VS2	VS3	S4	S5	M7	M8	L9
Kcc	Short-circuit ratio	0.52	0.49	0.46	0.51	0.44	0.41	0.45	0.42
Xd	Direct-axis synchro. reactance unsaturated	252	260	272	239	273	287	275	294
Xq	Quadrature-axis synchro. reactance unsaturated	151	156	163	143	163	172	165	176
T'do	No-load transient time constant	733	759	803	880	880	914	931	962
X'd	Direct-axis transient reactance saturated	17.2	17.1	16.9	13.5	15.5	15.7	14.7	15.3
T'd	Short-circuit transient time constant	50	50	50	50	50	50	50	50
X''d	Direct-axis subtransient reactance saturated	8.6	8.5	8.4	6.7	7.7	7.8	7.3	7.6
T''d	Subtransient time constant	5	5	5	5	5	5	5	5
X''q	Quadrature-axis subtransient reactance saturated	12.1	12.1	12.0	9.6	11.0	11.2	10.5	10.5
Xo	Zero sequence reactance unsaturated	0.46	0.83	0.31	0.26	0.69	0.05	0.97	0.86
X2	Negative sequence reactance saturated	10.37	10.35	10.24	8.22	9.39	9.55	8.97	9.30
Ta	Armature time constant	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0

Other class H/480 V data

io (A)	No-load excitation current (SHUNT/AREP)	0.55/0.85	0.52/0.8	0.51/0.79	0.49/0.75	0.49/0.75	0.46/0.71	0.5/0.77	0.5/0.77
ic (A)	On-load excitation current (SHUNT/AREP)	1.76/2.69	1.73/2.65	1.77/2.72	1.54/2.36	1.73/2.66	1.75/2.68	1.84/2.82	1.99/3.06
uc (V)	On-load excitation voltage (SHUNT/AREP)	30.2/16.3	29.7/19	30.3/19.4	26.4/16.9	29.4/18.8	29.5/18.8	30.9/19.7	32.9/21.1
ms	Response time ($\Delta U = 20\%$ transient)	< 500ms	< 500ms	< 500ms	< 500ms	< 500ms	< 500ms	< 500ms	< 500ms
kVA	Start ($\Delta U = 20\%$ cont. or ($\Delta U = 30\%$ trans.) SHUNT	63.3	68.1	82	111.8	111.8	124.7	146.9	165.6
kVA	Start ($\Delta U = 20\%$ cont. or ($\Delta U = 30\%$ trans.) AREP	71.4	76.9	92.6	121.8	121.6	133.8	137.9	152.2
%	Transient ΔU (on-load 4/4) SHUNT - P.F.: 0.8 _{LAG}	16.8	16.8	16.6	14.7	15.8	15.9	15.4	15.7
%	Transient ΔU (on-load 4/4) AREP - P.F.: 0.8 _{LAG}	14.1	14.1	14.0	12.5	13.4	13.5	13.0	13.3
W	No-load losses	1021	1016	1087	1229	1229	1258	1462	1591
W	Heat dissipation	3389	3505	3914	3597	4312	4709	5120	5917

Transient voltage variation 480V - 60 Hz



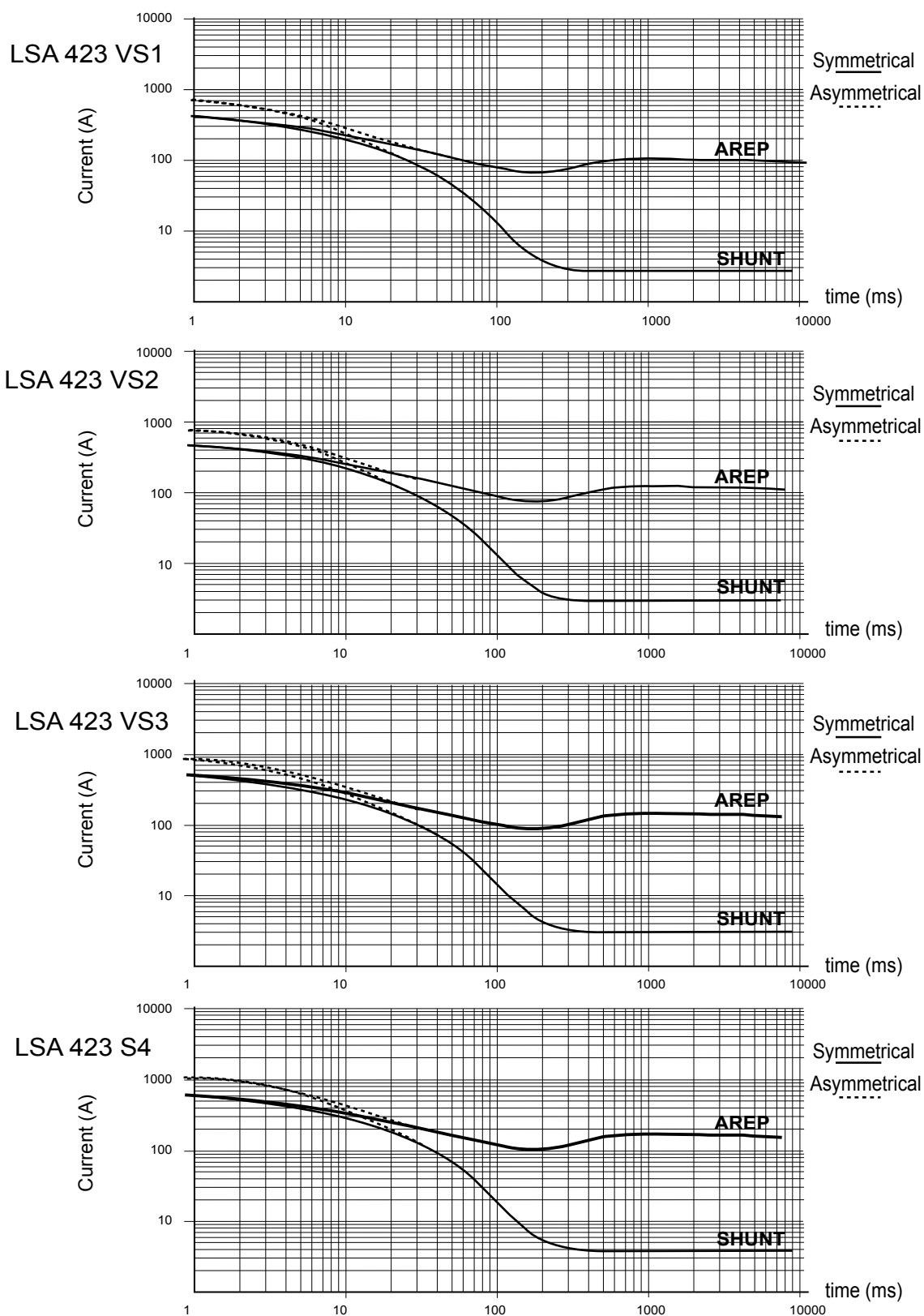
1) For a PF with a $\cos \phi$ other than 0.6, multiply the kVA by $K = \sin \phi / 0.8$

Example of calculation for a PF with a $\cos \phi$ other than 0.6: motor starting kVA calculated at PF 0.4 = 40 kVA

► $\sin \phi 0.4 = 0.9165$ ► $K = 1.145$ ► corrected kVA = 45.8 kVA ► Corresponding voltage drop for L9 = 12 %.

2) For a voltage U other than 480 V (Y), 277 V (), 240 V (YY) at 60 Hz, multiply the kVA by $(480/U)^2$ or $(277/U)^2$ or $(240/U)^2$.

3-phase short-circuit curves at no load and rated speed (star connection Y)



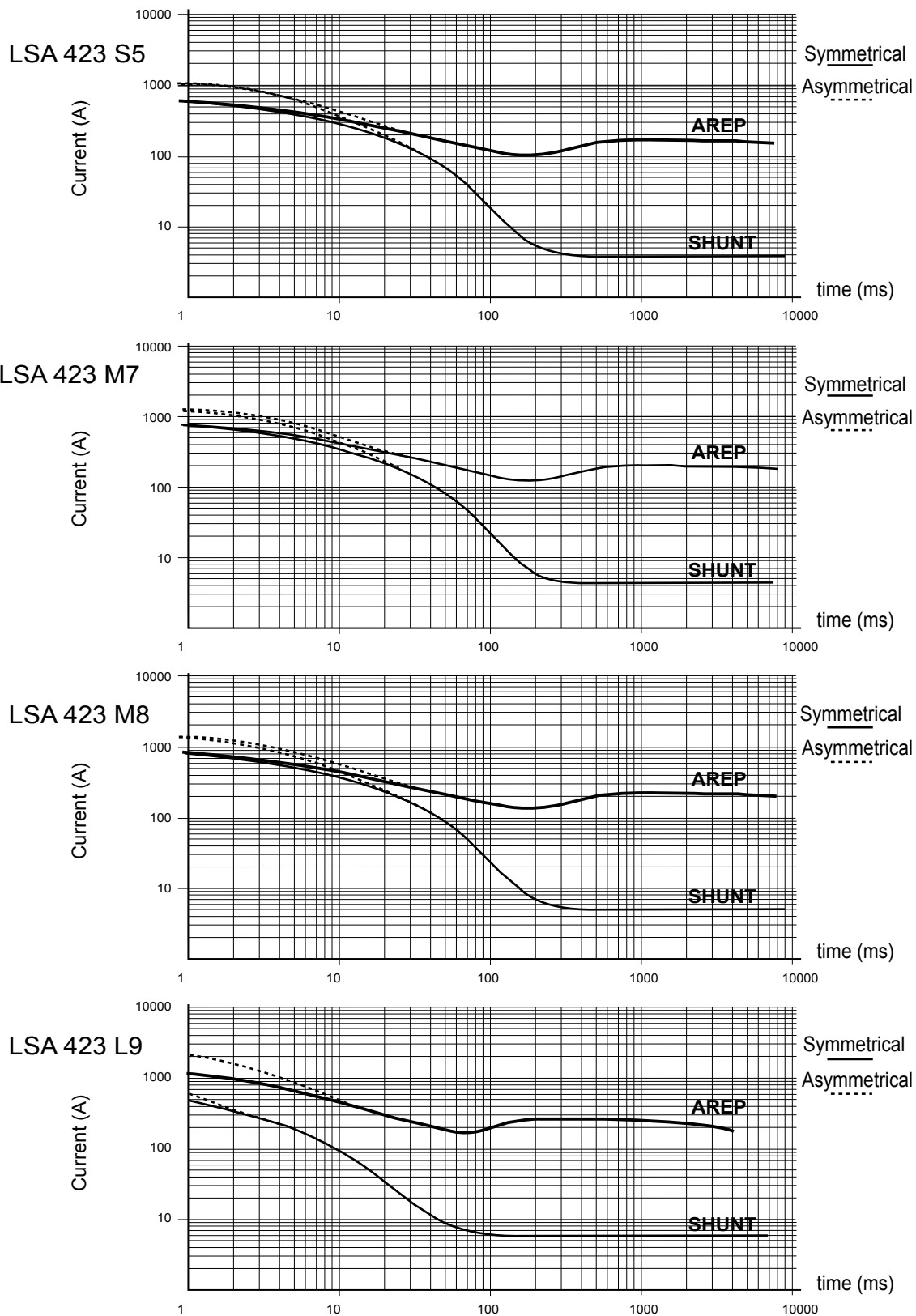
Influence due to connection

Curves shown are for star (Y) connection.

For other connections, use the following multiplication factors:

- Series delta : Current value x 1.732 - Parallel star : Current value x 2

3-phase short-circuit curves at no load and rated speed (star connection Y)



Influence due to short-circuit

Curves are based on a three-phase short-circuit.

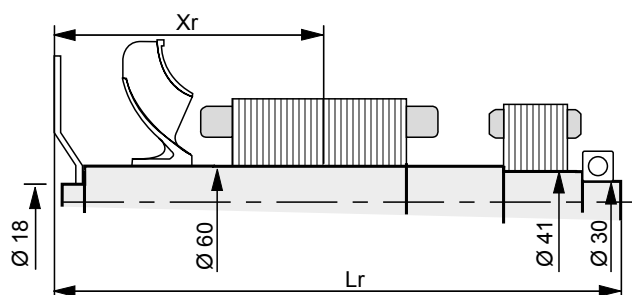
For other types of short-circuit, use the following multiplication factors

	3-phase	2-phase L/L	1-phase L/N
Instantaneous (max.)	1	0.87	1.3
Continuous	1	1.5	2.2
Maximum duration (AREP/PMG)	10 sec.	5 sec.	2 sec.

25 to 60 kVA- 50 Hz / 31.5 to 75 kVA- 60 Hz

Technical drawing of the front view of a circular device. The drawing shows a circular face with a central 5-pin connector labeled $\varnothing 64$. The outer diameter is 420. There are 11 holes around the perimeter, labeled $XBG \varnothing 11$ holes equid. over $\varnothing M$. A 15° angle is indicated for the top access point. Labels include "Access to terminals", "Access to AVR", "Cable outlet", "X Ø Y holes equid. over Ø U", and "Optional H = 225". Dimensions include 264, H+3, 5, A2, and A1.

Flange (mm)							Flex plate (mm)					
S.A.E.	P	N	M	XBG	T	LA	S.A.E.	BX	U	X	Y	AH
4	406	361.95	381	12	6	122	11 1/2	352.42	333.38	8	11	39.6
3	452	409.58	428.62	12	5	112.5	10	314.32	295.28	8	11	53.8
2	490	447.675	466.725	12	6	111	8	263.52	244.48	6	11	62
							7 1/2	241.3	222.25	8	9	30.2



Ref : 4802 en

25 to 60 kVA- 50 Hz / 31.5 to 75 kVA- 60 Hz

[illegible]

Technical drawing of a mechanical assembly showing a cross-section of a shaft with various components and dimensions. The drawing includes the following dimensions and labels:

- $\varnothing 48$: Diameter of the leftmost shaft section.
- $\varnothing 50$: Diameter of the shaft section after the first step.
- $\varnothing 60$: Diameter of the main shaft section.
- $\varnothing 41$: Diameter of the shaft section after the second step.
- $\varnothing 30$: Diameter of the rightmost shaft section.
- X_r : Horizontal distance from the center of the first step to the center of the second step.
- L_r : Total horizontal length of the shaft assembly.

Type	Xr	Lr	M	J
LSA 42.3 VS1	238	603	45.18	0.2135
LSA 42.3 VS2	240	603	47.18	0.2263
LSA 42.3 VS3	245	603	51.23	0.2518
LSA 42.3 S4	267	648	61.31	0.3096
LSA 42.3 S5	267	648	61.31	0.3096
LSA 42.3 M7	281	688	67.23	0.3417
LSA 42.3 M8	286	688	70.23	0.3609
LSA 42.3 L9	299	718	77.29	0.4066

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Contact



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