

GX SERIES

STAGE V EMISSION COMPLIANT

DIESEL GENERATOR
GROUPE ELECTROGENE DIESEL
GRUPO ELECTROGENO DIESEL
GRUPPO ELETTROGENO DIESEL

MODEL
 MODELE
 MODELO
 MODELLO

GX74K V

POWERED BY

KOHLER



**LERROY
SOMER**



SOUNDPROOF VERSION



GENERATING SET PERFORMANCE PERFORMANCES DU GROUPE PRESTACIONES DEL GRUPO PRESTAZIONI DEL GRUPPO		50 Hz	
Voltage Voltage Voltaje Tensione		V	400 / 230
Prime Power Puissance service continue Potencia servicio continuo Potenza servizio continuo	PRP	kVA	60,0
Stand-by Power Puissance service secours Potencia servicio emergencia Potenza servizio in emergenza	LTP	kVA	60,0
Prime Power Puissance service continue Potencia servicio continuo Potenza servizio continuo	PRP	kWe	48,0
Stand-by Power Puissance service secours Potencia servicio emergencia Potenza servizio in emergenza	LTP	kWe	48,0
Power factor Facteur de puissance Factor de potencia Fattore di potenza	cos φ		0,8
Fuel consumption Consommation combustible Consumo de combustible Consumo combustibile	70 %	l/h	9,4

ENGINE MOTEUR MOTOR MOTORE		KOHLER		KDI3404TCR CAC	
PERFORMANCE PERFORMANCES PRESTACIONES PRESTAZIONI		1500 rpm			
Prime Power					
Puissance service continue	PRP	kWm		53,8	
Potencia servicio continuo					
Potenza servizio continuo					
Stand-by Power					
Puissance service secours	LTP	kWm		53,8	
Potencia servicio emergencia					
Potenza servizio in emergenza					
Specific fuel consumption			25%	254	
Consommation spécifique combustible		g/kWh	50%	222	
Consumo específico de combustible			75%	212	
Consumo specifico combustibile			100%	206	
Diesel 4 Stroke – Injection type					direct
Diesel 4 temps – Type injection					directe
Diesel 4 tiempos – Tipo de inyeccion					directa
Diesel a 4 tempi – Tipo di iniezione					diretta
Aspiration type					Turbocharged
Type d'aspiration					Suraalimentée
Tipo de aspiracion					sobrealimentato
Tipo d'aspirazione					sovralimentata
Cooling system					Water
Refroidissement					Eau
Sistema de refrigeracion					Agua
Raffreddamento					Acqua
Speed governor					Electronic
Régulateur de tours					Electronique
Regulador					Electronico
Regolatore di giri					Elettronico
Cylinders, numbers and arrangement					
Nombre et disposition des cylindres					4 L
Cilindros, numero y disposicion					
Numero e disposizione dei cilindri					
Total displacement					
Cylindrée totale			cm ³	3.400	
Cilindrata total					
Cilindrata totale					
Bore x stroke					
Alésage x course			mm	88 x 102	
Diametro x carrera					
Alesaggio x corsa					
Compression ratio					
Rapport de compression					---
Relación de compresión					
Rapporto di compressione					
Engine electric system voltage					
Voltage système électrique moteur					---
Voltaje sistema eléctrico motor					
Voltaggio sistema elettrico motore					
Derating for temperature			0 ÷ 25°C	0	
Déclassement pour temperature					
Declasamiento para temperatura			> 25 °C	2%/5°C	
Declassamento per temperatura					
Derating for altitude			0÷100 mt	0	
Déclassement pour altitude					
Declasamiento para altitud			>100 mt	1%/100m	
Declassamento per altitudine					

ALTERNATOR ALTERNATEUR ALTERNADOR ALTERNATORE		LEROY SOMER	
PERFORMANCE PERFORMANCES PRESTACIONES PRESTAZIONI		1500 rpm	
Model Modèle Modelo Modello		LSA 42.3 L9	
Prime Power Puissance service continue Potencia servicio continuo Potenza servizio continuo	40 °C	kVA kWe	60,0 48,0
Stand-by Power Puissance service secours Potencia servicio emergencia Potenza servizio in emergenza	40 °C	KVA kWe	64,0 51,0
Stand-by Power Puissance service secours Potencia servicio emergencia Potenza servizio in emergenza	27 °C	KVA kWe	66,0 53,0
Efficiency Rendement Eficiencia Efficienza		1/4 2/4 3/4 4/4	89,8 % 91,7 % 91,3 % 90,3 %
Standard winding connections Liaison des bobinages Tipo de conexión Collegamento avvolgimenti		Y	
Exciter Eccitatrice Excitador Eccitatrice	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		± 0,25 %	
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	
Maximum 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	D 350 AREP
Derating for temperature Déclassement pour température Declasamiento para temperatura Declassamento per temperatura		0 ÷ 40°C > 40 °C	0 3 % / 5°C
Derating for altitude Déclassement pour altitude Declasamiento para altitud Declassamento per altitudine		0 ÷ 1000 m 1000 ÷ 2500 m 2500 ÷ 3000 m	0 3% / 500 m 4% / 500 m

LOGISTIC INFORMATION
INFORMATIONS 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	ON REQUEST	ON REQUEST	1500	255	113	164

GENSET STANDARD EQUIPMENT
EQUIPEMENT STANDARD GROUPE ELECTROGENE
EQUIPAMIENTO 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 ELECTRICO MANUAL AUTOSTART
QUADRO ELETTRICO MANUALE AUTOSTART

Q7310 AUS

100A (400 V - 3 ph - 50Hz - 1500 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	EQUIPAMIENTO 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
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**DSE
7310**
CONTROL BOARD
CARTE ELECTRONIQUE DE CONTROL
CARTA ELECTRONICA DE CONTROL
SCHEDA ELETTRONICA 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/sous vitesse Niveau de combustible Rupture courroie Surcoursant 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	VISOR 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 ELECTRICO AUTOMATICO** **QUADRO ELETTRICO AUTOMATICO**

1)		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 ELECTRICO COMPLETO EN ARMARIO SEPARADO DEL GRUPO Equipamiento: carta electronica de controllo, interruptor magnetotermico, cargador de bateria, transferencial, llave quadro. QUADRO ELETTRICO COMPLETO SEPARATO DAL GRUPPO Equipaggiamento: scheda elettronica di controllo, interruttore magnetotermico, carica batteria, telecommutazione e chiave quadro.
2)		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 ELECTRICO MONTADO SOBRE EL GRUPO SIN TRANSFERENCIAL Equipamiento: carta electronica de controllo, interruptor magnetotermico, cargador de bateria, llave quadro. QUADRO ELETTRICO MONTATO SUL GRUPPO ELETTROGENO SENZA TELECOMUTAZIONE Equipaggiamento: scheda elettronica di controllo, interruttore magnetotermico, carica batteria, chiave quadro.
3)		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 ELECTRICO MONTADO SOBRE EL GRUPO CON TRANSFERENCIAL SEPARADO Equipamiento: carta electronica de controllo, interruptor magnetotermico, cargador de bateria, llave quadro, transferencial separado. QUADRO ELETTRICO MONTATO SUL GRUPPO ELETTROGENO CON TELECOMUTAZIONE SEPARATA Equipaggiamento: scheda elettronica di controllo, interruttore magnetotermico, carica batteria, chiave quadro, telecommutazione in armadio separato.

 DSE 7320 CONTROL BOARD CARTE ELECTRONIQUE DE CONTROL CARTA ELETTRONICA DI 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 Interrupor magnetotermico Cargador de batería Botón 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) Amperímetro (3 fases) Frecuencímetro KW- metro kVA- metro Cos φ- metro Revoluciones por minuto metro Termómetro agua (opcional) Presión aceite (opcional) Medida horas de marcha Voltmetro tensión de red Voltmetro batería Frecuencia red Tensión de carga Número de arranques Nivel carburante %	Voltmetro tensione generatore (3 fasi) Amperometro generatore (3 fasi) Frequenzímetro generatore KW- metro kVA- metro Cos φ- metro Gm metro Temperatura acqua (facoltativo) Pressione olio (facoltativo) Contatore di funzionamento gruppo Voltmetro tensione rete Voltmetro batteria Frequenza rete Tensione di carica Contavviamanti 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 Surcoursant 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 máxima 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 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 maintenance. 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

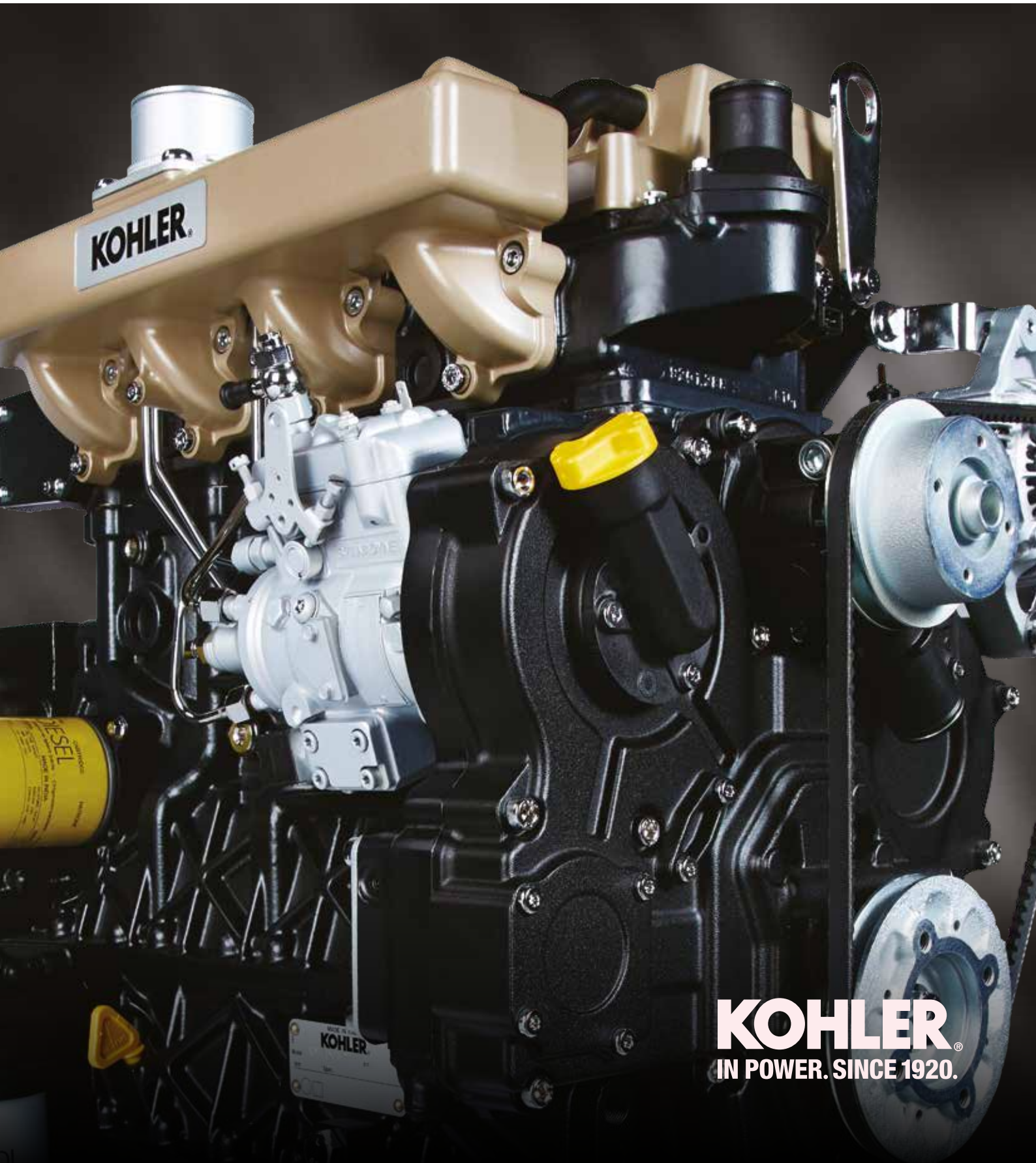
Nuestra calidad en 13 puntos

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 (optional) Bouchon gasoil avec clé positionne à l'extérieur (en option) Tapo gasoleo con llave situado a l'externo (opcional) Tappo gasolio con chiave posizionato all'esterno (in opzione)
8		Fully bundled base 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'entré 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

KOHLER DIESEL ENGINES

Generator Ratings



KOHLER
IN POWER. SINCE 1920.

LIQUID COOLED

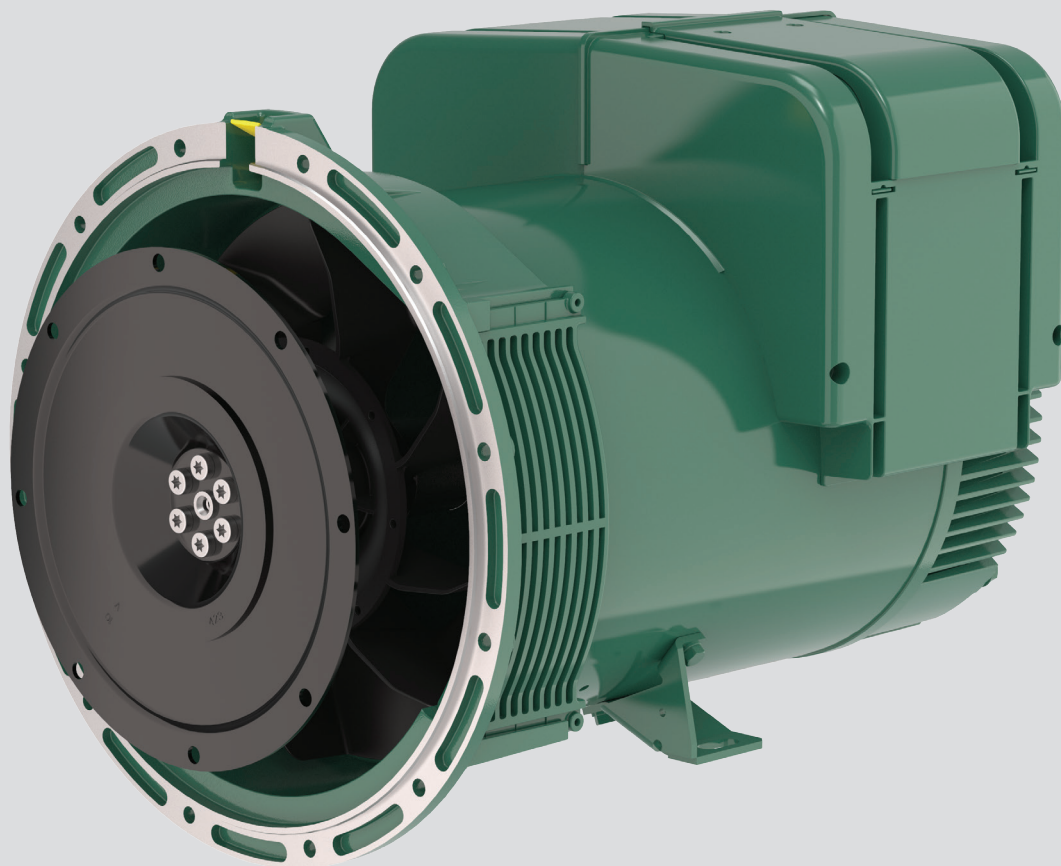
DIESEL ENGINES

Freq.	Rpm	ENGINE MODEL	GROSS ENGINE POWER*		Given alternator efficiency %	ELECTRICAL POWER**				Flanging	Emission compliance	
			Stand-by	Prime		Intermittent (Stand-by)		Continuous (Prime)				
						kVA	kW	kVA	kW			
50 Hz	1500	KDW702	5.5 - 7.5	5.0 - 6.8	80%	5.5	4.4	5.0	4.0	SAE 5 - 6.5"	-	
		KDW702	-	5.0 - 6.8 #	82%	-	-	4.9 #	4.0 #	SAE 5 - 6.5"	EU Stage V	
		KDW1003	8.5 - 11.6	7.7 - 10.5	85%	9.0	7.2	8.2	6.5	SAE 5 - 6.5"	-	
		KDW1003	8.0 - 10.7	7.7 - 10.5	85%	8.1	6.5	7.8	6.2	SAE 5 - 6.5"	EU Stage V	
		KDW1404	11.5 - 15.6	10.5 - 14.3	85%	12.2	9.8	11.2	8.9	SAE 5 - 6.5"	-	
		KDW1404	11.0 - 14.7	10.5 - 14.3	85%	11.1	8.9	10.6	8.5	SAE 5 - 6.5"	EU Stage V	
		KDW1603	15.5 - 21.1	14.1 - 19.2	86%	16.7	13.3	15.1	12.1	SAE 4 - 7.5"	-	
		KDW1603	15.0 - 20.1	14.1 - 19.2	86%	15.4	12.3	14.4	11.5	SAE 4 - 7.5"	EU Stage V	
		KDI 1903M	19.0 - 25.5	17.3 - 23.1	88%	20.9	16.7	19.0	15.2	SAE 4 - 7.5"	EU Stage IIIA	
		KDI 1903M	-	18.9 - 25.3 #	88%	-	-	20.8 #	16.6 #	SAE 4 - 7.5"	EU Stage V	
		KDW2204	19.5 - 26.5	17.7 - 24.1	88%	21.5	17.2	19.5	15.6	SAE 4 - 7.5"	EU Stage IIIA	
		KDI 2504M	25.4 - 34.0	23.1 - 30.9	88%	27.9	22.4	25.4	20.3	SAE 4 - 7.5"	EU Stage IIIA	
		KDW2204/T	26.0 - 35.4	23.6 - 32.1	88%	28.6	22.9	26.0	20.8	SAE 4 - 7.5"	EU Stage II	
		KDI 2504TM-30	32.0 - 42.9	29.1 - 39.0	88%	35.2	28.2	32.0	25.6	SAE 3 - 11.5"	EU Stage IIIA	
		KDI 2504TM-40-EU	36.9 - 49.4	33.5 - 45.0	88%	40.6	32.5	36.9	29.5	SAE 3 - 11.5"	EU Stage IIIA	
		KDI 2504TM-40	41.0 - 54.9	37.3 - 50.0	88%	45.1	36.1	41.0	32.8	SAE 3 - 11.5"	-	
		KDI 3404TM	61.0 - 81.7	55.5 - 74.3	89%	67.9	54.3	61.7	49.4	SAE 3 - 11.5"	-	
		KDI 3404TM ◊	61.5 - 82.4	55.9 - 74.9	89%	68.4	54.7	62.2	49.8	SAE 3 - 11.5"	EU Stage IIIA	
		KDI 1903TCR ◊	35.3 - 47.3	32.1 - 43.0	88%	36.6	29.3	33.1	26.5	SAE 3 - 11.5"	EU Stage V	
		KDI 2504TCR ◊	47.1 - 63.1	42.8 - 57.4	88%	49.6	39.7	44.9	35.9	SAE 3 - 11.5"	EU Stage V	
		KDI 3404TCR ◊	-	55.0 - 73.7 #	88%	-	-	57.8 #	46.2 #	SAE 3 - 11.5"	EU Stage V	
		KDI 3404TCR SCR	100 - 134	90.9 - 121.8	92%	112.1	89.7	101.7	81.3	SAE 3 - 11.5"	EU Stage V	
	3000	KDW702	11.0 - 15.0	10.0 - 13.6	85%	11.7	9.4	10.6	8.5	SAE 5 - 6.5"	Not emitted / EU Stage V	
		KDW1003	18.0 - 24.2	16.4 - 22.0	85%	19.1	15.3	17.4	13.9	SAE 5 - 6.5"	EU Stage V	
		KDW1404	22.0 - 29.9	20.0 - 27.2	85%	23.4	18.7	21.3	17.0	SAE 5 - 6.5"	EU Stage IIIA	
		KDW1404	-	18.9 - 25.3 #	85%	-	-	20.1 #	16.1 #	SAE 5 - 6.5"	EU Stage V	
		KDW1603	26.7 - 36.3	24.3 - 33.0	86%	28.7	23.0	26.1	20.9	SAE 4 - 7.5"	EU Stage IIIA	
		KDW2204	34.5 - 46.9	31.4 - 42.7	86%	37.6	29.7	34.2	27.0	SAE 4 - 7.5"	EU Stage IIIA	
		KDW2204/T	44.3 - 60.2	40.3 - 54.8	86%	47.6	38.1	43.3	34.6	SAE 4 - 7.5"	EU Stage II	
60 Hz	1800	KDW702	6.5 - 8.8	5.9 - 8.0	80%	6.5	5.2	6.0	4.7	SAE 5 - 6.5"	Tier 2	Tier 4 F
		KDW1003	10.0 - 13.6	9.1 - 12.4	85%	10.6	8.5	9.7	7.7	SAE 5 - 6.5"	Tier 2	Tier 4 F
		KDW1404	13.5 - 18.4	12.3 - 16.7	85%	14.3	11.5	13.1	10.4	SAE 5 - 6.5"	Tier 2	Tier 4 F
		KDI 1903M	-	18.4 - 24.7 #	88%	-	-	20.2 #	16.2 #	SAE 4 - 7.5"	Tier 4 F	Tier 4 F
		KDW1603	18.5 - 25.2	16.8 - 22.9	86%	19.9	15.9	18.0	14.5	SAE 4 - 7.5"	Tier 2	Tier 2
		KDI 1903M	21.0 - 28.1	19.1 - 25.6	88%	23.1	18.5	21.0	16.8	SAE 4 - 7.5"	Tier 3	Tier 3
		KDW 2204	22.5 - 30.6	20.5 - 27.8	88%	24.8	19.8	22.5	18.0	SAE 4 - 7.5"	Tier 2	Tier 2
		KDI 2504M	29.5 - 39.5	26.8 - 35.9	88%	32.5	26.0	29.5	23.6	SAE 4 - 7.5"	Tier 3	Tier 3
		KDW 2204/T	31.5 - 42.8	28.6 - 38.9	88%	34.7	27.7	31.5	25.2	SAE 3 - 11.5"	Tier 2	Tier 2
		KDI 2504TM	36.4 - 48.8	33.1 - 44.3	88%	40.0	32.0	36.4	29.1	SAE 4 - 7.5"	Tier 3	Tier 3
		KDI 1903TCR ◊	37.0 - 49.6	33.6 - 45.1	88%	40.7	32.6	37.0	29.6	SAE 4 - 7.5"	Tier 4 F	Tier 4 F
		KDI 2504TCR ◊	47.1 - 63.1	42.8 - 57.4	88%	51.8	41.4	47.1	37.7	SAE 3 - 11.5"	Tier 4 F	Tier 4 F
		KDI 3404TCR ◊	55.4 - 74.2	50.4 - 67.5	89%	61.6	49.3	56.0	44.8	SAE 3 - 11.5"	Tier 4 F	Tier 4 F
		KDI 3404TM ◊	70.0 - 93.8	63.6 - 85.2	89%	77.9	62.3	70.8	56.6	SAE 3 - 11.5"	Tier 3	Tier 3
	3600	KDW702	11.7 - 16.0	10.6 - 14.5	85%	12.2	9.9	11.0	9.0	SAE 5 - 6.5"	Tier 2	Tier 2
		KDW1003	18.0 - 24.5	16.4 - 22.3	85%	19.1	15.3	17.4	13.9	SAE 5 - 6.5"	Tier 2	Tier 4 F
		KDW1404	24.5 - 33.3	22.3 - 30.3	85%	26.0	20.8	23.7	18.9	SAE 5 - 6.5"	Tier 3	Tier 3

◊ Equipped with charged air after cooler

Prime Power no overload

For more information, contact your KOHLER source of supply.
Kohler Co. reserves the right to make modifications without prior notice.



LSA 42.3

Low Voltage Alternator - 4 pole

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

Electrical and mechanical data

LEROY-SOMER™

Nidec
All for dreams

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 1.32-33, ISO 8528-3, CSA C22.2 n°100-14, UL 1446 (UL 1004 on request), marine regulations, etc.

It can be integrated into a EC marked generator.

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

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)
- Complies with EN 61000-6-3, EN 61000-6-2, EN 55011, group 1 class B for European zone (EC 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 (option)	PMG (option)	C.T. Current transformer for paralleling	Mains paralleling	3-phase sensing	3-phase sensing for mains paralleling unbalanced	Remote voltage potentiometer
R220	Standard	-	-	-	-	-	-	-
D350	-	Standard	Standard	√	√	√	√	√
D550*	Option	Option	Option	√	√	√	contact us	√

* Steel terminal box mounting only √ : Possible option

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 ≤ 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



General characteristics

Insulation class	H	Excitation system	SHUNT	AREP / PMG
Winding pitch	2/3 (wdg 6)	AVR type	R220	D350
Number of wires	12	Voltage regulation (*)	± 0.5%	± 0.25%
Protection	IP 23	Short-circuit current	-	300% (3 IN): 10 s
Altitude	≤ 1000 m	Total Harmonic Distortion THD (**) in no-load	< 2%	
Overspeed	2250 min ⁻¹	Total Harmonic Distortion THD (**) on linear load :	< 4%	
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).

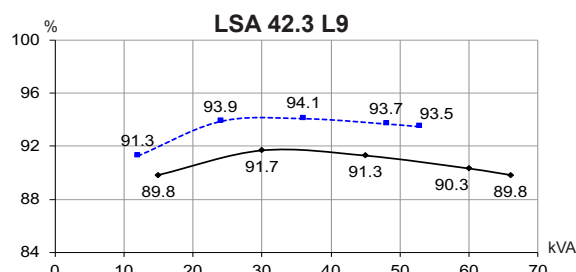
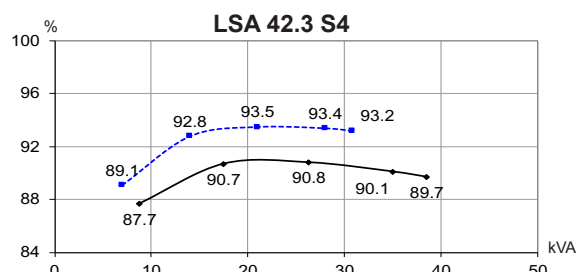
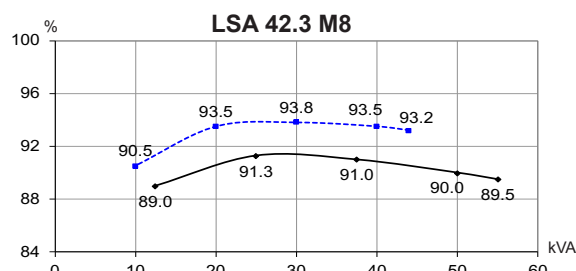
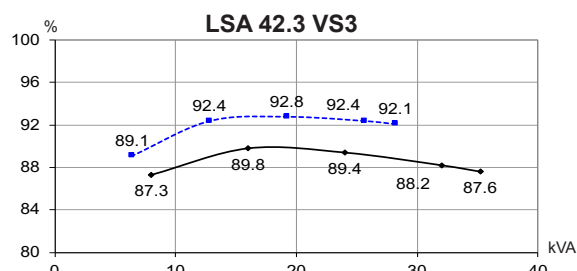
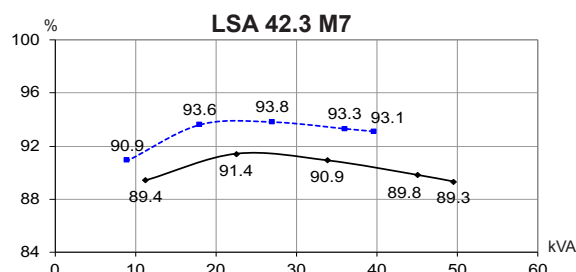
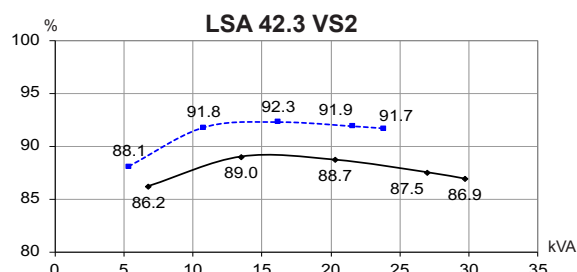
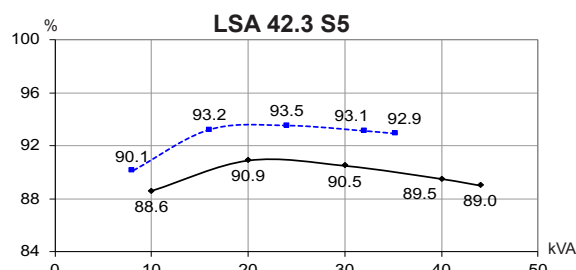
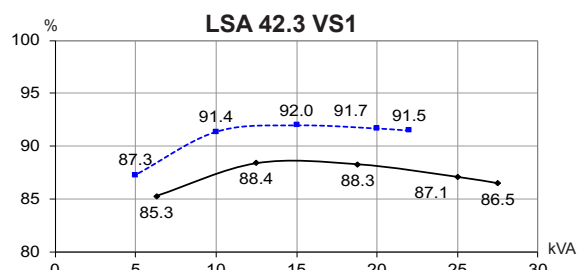
Ratings 50 Hz - 1500 R.P.M.

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					
LSA 42.3 VS1	kVA	25	25	25	24.5	15	23	23	23	22.5	13.5	26.5	26.5	26.5	26	16	27.5	27.5	27.5	27	16.5
	kW	20	20	20	19.5	12	18.5	18.5	18.5	18	11	21	21	21	21	13	22	22	22	21.5	13
LSA 42.3 VS2	kVA	27	27	27	26	16	24.5	24.5	24.5	23.5	14.5	28.5	28.5	28.5	27.5	17	30	30	30	28.5	17.5
	kW	21.5	21.5	21.5	21	13	19.5	19.5	19.5	19	11.5	23	23	23	22	13.5	24	24	24	23	14
LSA 42.3 VS3	kVA	32	32	32	30	19	29	29	29	27.5	17.5	34	34	34	32	20	35	35	35	33	21
	kW	25.5	25.5	25.5	24	15	23	23	23	22	14	27	27	27	25.5	16	28	28	28	26.5	17
LSA 42.3 S4	kVA	35	35	35	30.5	22	32	32	32	28	20	37	37	37	32.5	23.5	38.5	38.5	38.5	33.5	24
	kW	28	28	28	24.5	17.5	25.5	25.5	25.5	22.5	16	29.5	29.5	29.5	26	19	31	31	31	27	19
LSA 42.3 S5	kVA	40	40	40	35	25	36.5	36.5	36.5	32	23	42.5	42.5	42.5	37	26.5	45	45	45	38.5	27.5
	kW	32	32	32	28	20	29	29	29	25.5	18.5	34	34	34	29.5	21	36	36	36	31	22
LSA 2.3 M7	kVA	45	45	45	39	27	41	41	41	35.5	24.5	48	48	48	41.5	28.5	50	50	50	43	29.5
	kW	36	36	36	31	21.5	33	33	33	28.5	19.5	38.5	38.5	38.5	33	23	40	40	40	34.5	23.5
LSA 42.3 M8	kVA	50	50	50	43	30	45.5	45.5	45.5	39	27.5	53	53	53	45.5	32	55	55	55	47.5	33
	kW	40	40	40	34.5	24	36.5	36.5	36.5	31	22	42	42	42	36.5	25.5	44	44	44	38	26.5
LSA 42.3 L9	kVA	60	60	60	52	36	55	55	55	47.5	33	64	64	64	55	38	66	66	66	57	39.5
	kW	48	48	48	42	29	44	44	44	38	26.5	51	51	51	44	30.5	53	53	53	46	31.5

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			
LSA 42.3 VS1		kVA	29	31.5	31.5	31.5	18.9	26.5	28.5	28.5	28.5	17	30.5	33.5	33.5	33.5	20	32	34.5	34.5	34.5	20.8
		kW	23	25	25	25	15	21	23	23	23	13.5	24.5	27	27	27	16	25.5	27.5	27.5	27.5	16.5
LSA 42.3 VS2		kVA	30	32	34	34	19.2	27.5	29	31	31	17.5	32	34	36	36	20.5	33	35	37.5	37.5	21.1
		kW	24	25.5	27	27	15.5	22	23	25	25	14	25.5	27	29	29	16.5	26.5	28	30	30	17
LSA 42.3 VS3		kVA	34.5	38	40	40	23	31.5	34.5	36.5	36.5	21	36.5	40.5	42.5	42.5	24.5	38	42	44	44	25.5
		kW	27.5	30.5	32	32	18.5	25	27.5	29	29	17	29	32.5	34	34	19.5	30.5	33.5	35	35	20.5
LSA 42.3 S4		kVA	37.5	40.5	43	44	24	34	37	39	40	22	40	43	45.5	46.5	25.5	41.5	44.5	47.5	48.5	26.5
		kW	30	32.5	34.5	35	19	27	29.5	31	32	17.5	32	34.5	36.5	37	20.5	33	35.5	38	39	21
LSA 42.3 S5		kVA	42	46	49	50	27.5	38	42	44.5	45.5	25	44.5	49	52	53	29	46	51	54	55	30.5
		kW	33.5	37	39	40	22	30.5	33.5	35.5	36.5	20	35.5	39	42	42	23	37	41	43	44	24.5
LSA 2.3 M7		kVA	46	50	53.5	56.5	30	42	45.5	48.5	51	27.5	49	53	57	60	32	51	55	59	62.5	33
		kW	37	40	43	45	24	33.5	36.5	39	41	22	39	42	46	48	25.5	41	44	47	50	26.5
LSA 42.3 M8		kVA	51.5	56.5	59.5	62.5	34	47	51	54	57	31	55	60	63	66.5	36	57	62.5	65.5	69	37.5
		kW	41	45	48	50	27	37.5	41	43	46	25	44	48	50	53	29	46	50	52	55	30
LSA 42.3 L9		kVA	59	65	69	75	39	54	59	63	68	35.5	63	69	73	80	41.5	65	72	76	82.5	43
		kW	47	52	55	60	31	43	47	50	54	28.5	50	55	58	64	33	52	58	61	66	34.5

Efficiencies 400 V - 50 Hz (— P.F.: 0.8) (..... P.F.: 1)



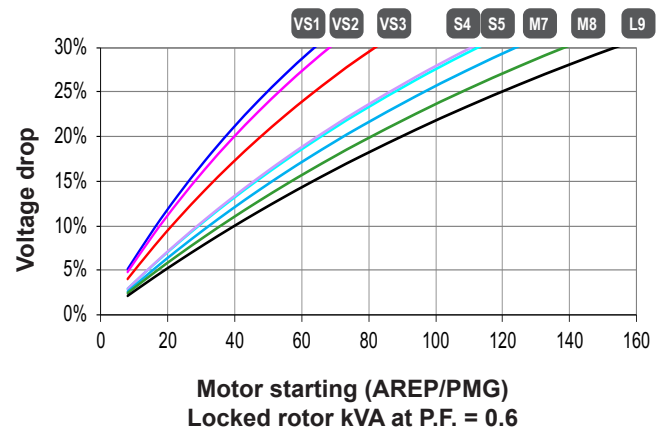
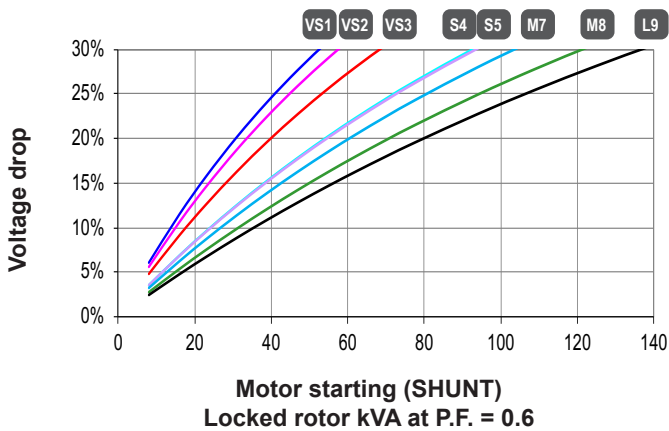
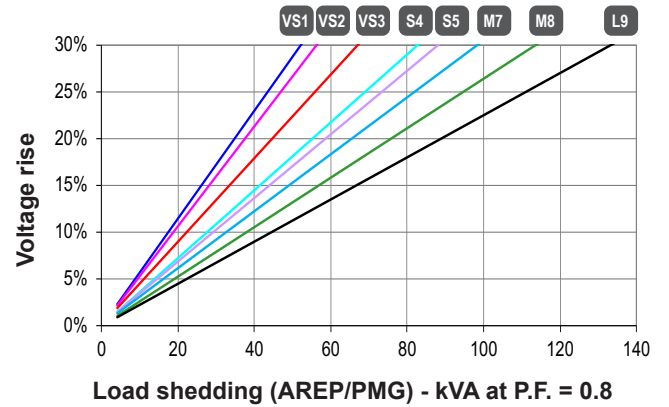
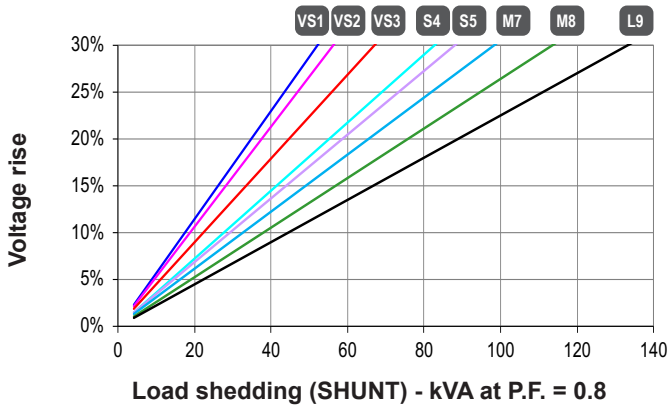
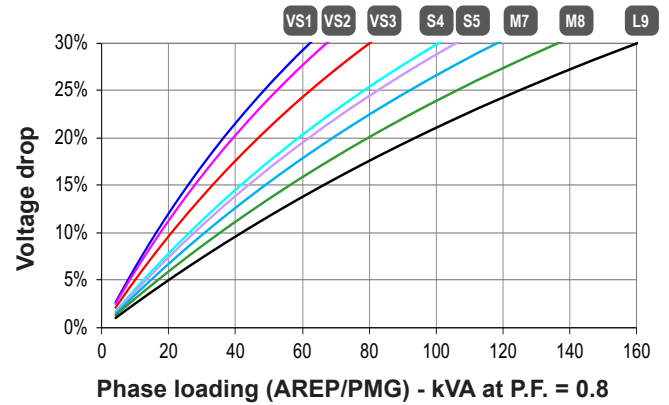
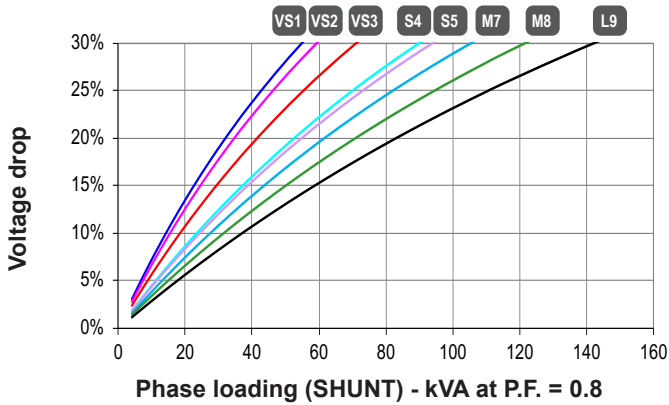
Reactances (%). Time constants (ms) - Class H / 400 V

		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	122	127	133	117	133	140	134	144
T'd	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	14.8	15	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	0.68	0.68	0.67	0.54	0.62	0.62	0.59	0.61
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	8	8	8	8	8	8	8

Other class H/400 V data

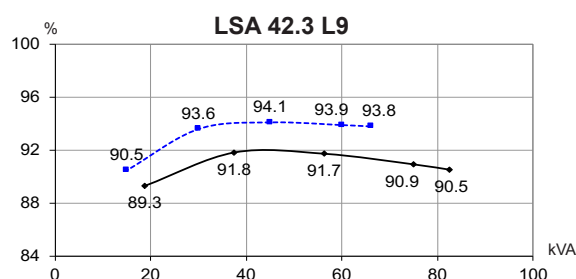
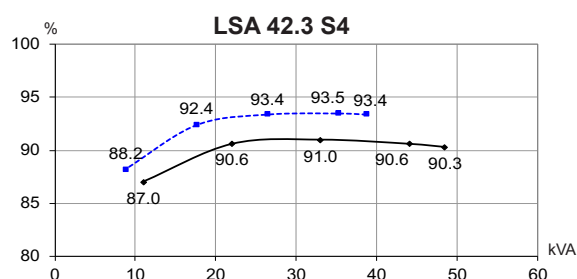
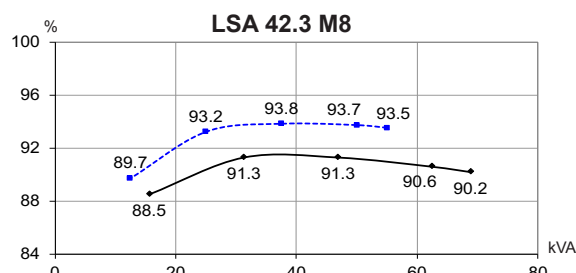
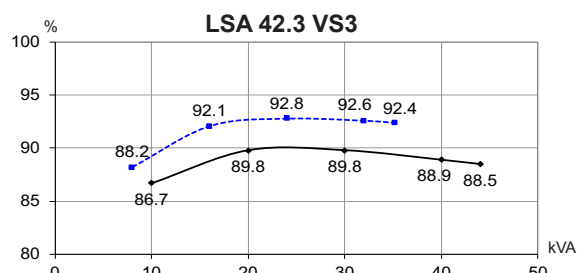
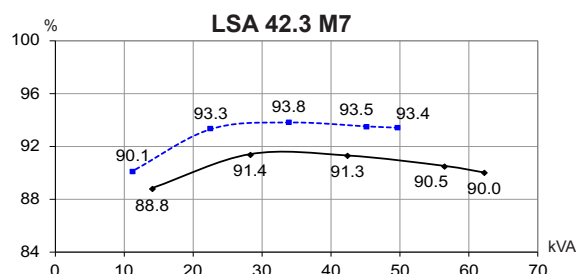
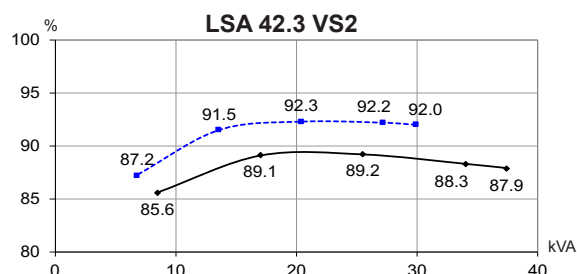
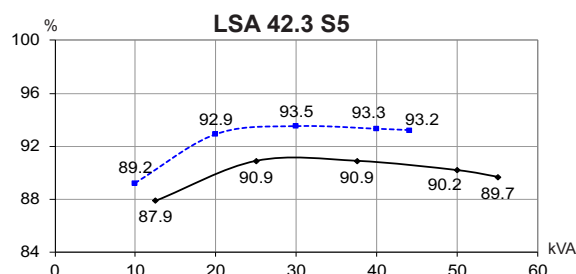
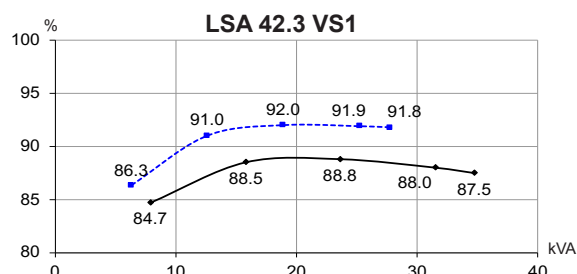
io (A)	No-load excitation current (SHUNT/AREP)	0.55/0.85	0.52/0.8	0.51/0.79	0.49/0.75	0.49/0.75	0.46/0.71	0.5/0.78	0.5/0.77
ic (A)	On-load excitation current (SHUNT/AREP)	1.77/2.72	1.75/2.68	1.8/2.76	1.55/2.38	1.76/2.7	1.77/2.71	1.9/2.91	2.07/3.18
uc (V)	On-load excitation voltage (SHUNT/AREP)	30.2/19.3	29.8/19	30.4/19.5	26.2/16.8	29.4/18.8	29.4/18.8	31.1/19.9	33.3/21.3
ms	Response time ($\Delta U = 20\%$ transient)	500	500	500	500	500	500	500	500
kVA	Start ($\Delta U = 20\%$ cont. or ($\Delta U = 30\%$ trans.) SHUNT	53	57	68	93	93	104	122	137
kVA	Start ($\Delta U = 20\%$ cont. or ($\Delta U = 30\%$ trans.) AREP	64	68	82	112	111	124	138	154
%	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}	14.7	14.7	14.6	13	14	14	13.6	13.9
W	No-load losses	719	713	762	861	861	879	1029	1120
W	Heat dissipation	2938	3058	3414	3072	3736	4050	4438	5134

Transient voltage variation 400V - 50 Hz



- 1) For a starting P.F. other than 0.6, the starting kVA must be multiplied by $K = \text{Sine P.F.} / 0.8$
- 2) For voltages other than 400V (Y), 230V (Δ) at 50 Hz, then kVA must be multiplied by $(400/U)^2$ or $(230/U)^2$.

Efficiencies 480 V - 60 Hz (— P.F.: 0.8) (..... P.F.: 1)



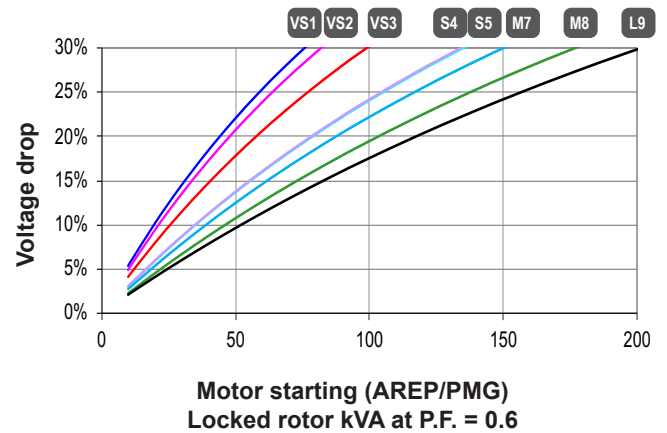
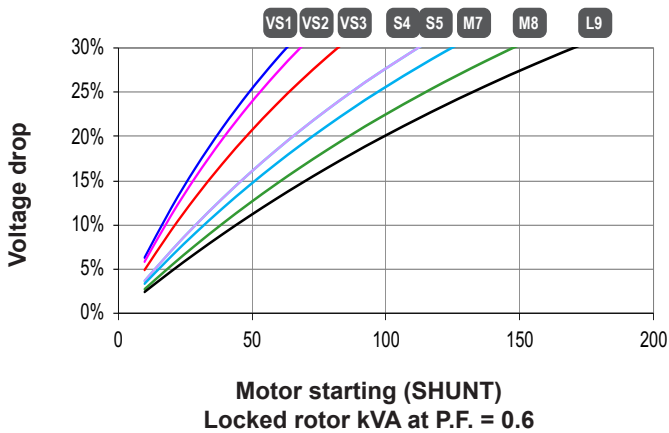
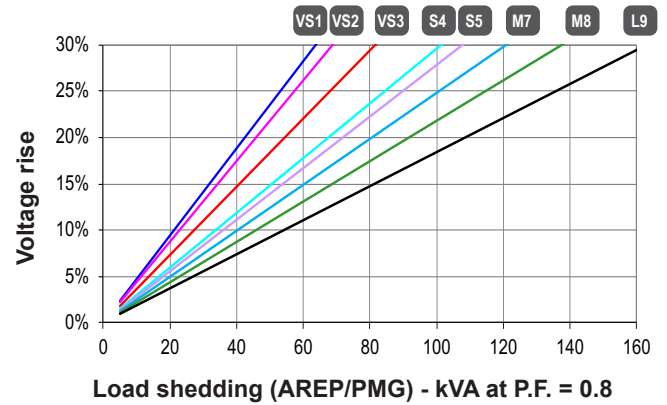
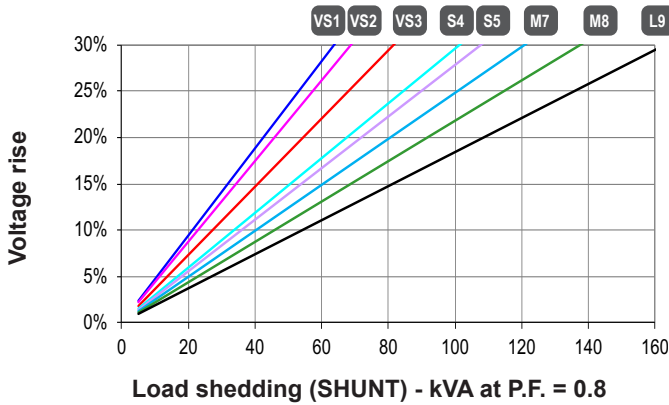
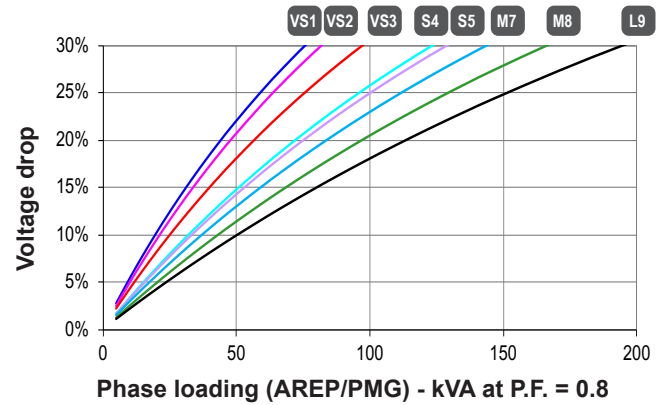
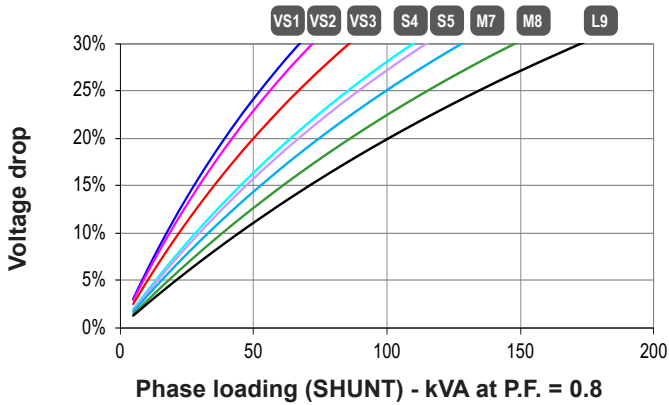
Reactances (%). Time constants (ms) - Class H / 480 V

		VS1	VS2	VS3	S4	S5	M7	M8	L9
Kcc	Short-circuit ratio	0.52	0.48	0.46	0.51	0.44	0.41	0.45	0.42
Xd	Direct-axis synchro. reactance unsaturated	252	261	272	240	273	287	275	294
Xq	Quadrature-axis synchro. reactance unsaturated	128	133	138	122	139	146	140	150
T'do	No-load transient time constant	733	759	803	880	880	914	931	962
X'd	Direct-axis transient reactance saturated	17.2	17.2	16.9	13.6	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	8.6	8.4	6.8	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	9.7	11	11.2	10.5	10.9
Xo	Zero sequence reactance	0.71	0.71	0.7	0.56	0.64	0.65	0.61	0.63
X2	Negative sequence reactance saturated	10.37	10.4	10.24	8.27	9.39	9.55	8.97	9.3
Ta	Armature time constant	8	8	8	8	8	8	8	8

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)	1.79/2.74	1.76/2.71	1.8/2.76	1.56/2.39	1.75/2.69	1.77/2.71	1.87/2.87	2.02/3.1
uc (V)	On-load excitation voltage (SHUNT/AREP)	30.8/19.7	30.3/19.4	30.8/19.7	26.7/17.1	29.8/19	29.8/19.1	31.3/20	33.3/21.3
ms	Response time ($\Delta U = 20\%$ transient)	500	500	500	500	500	500	500	500
kVA	Start ($\Delta U = 20\%$ cont. or ($\Delta U = 30\%$ trans.) SHUNT	63	68	82	112	112	125	147	170
kVA	Start ($\Delta U = 20\%$ cont. or ($\Delta U = 30\%$ trans.) AREP	76	82	99	135	134	150	177	202
%	Transient ΔU (on-load 4/4) SHUNT - P.F.: 0.8	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	15.1	15.1	15	13.3	14.3	14.4	13.9	14.2
W	No-load losses	1021	1016	1087	1229	1229	1258	1462	1590
W	Heat dissipation	3431	3568	3954	3640	4343	4737	5160	5960

Transient voltage variation 480V - 60 Hz

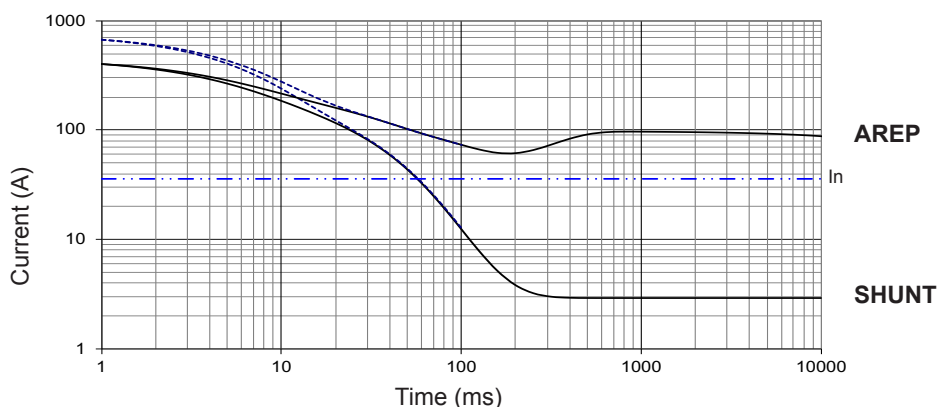


- 1) For a starting P.F. other than 0.6, the starting kVA must be multiplied by $K = \text{Sine P.F.} / 0.6$
- 2) For voltages other than 480V (Y), 277V (Δ), 240V (YY) at 60 Hz, then kVA must be multiplied by $(480/U)^2$ or $(277/U)^2$ or $(240/U)^2$.

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

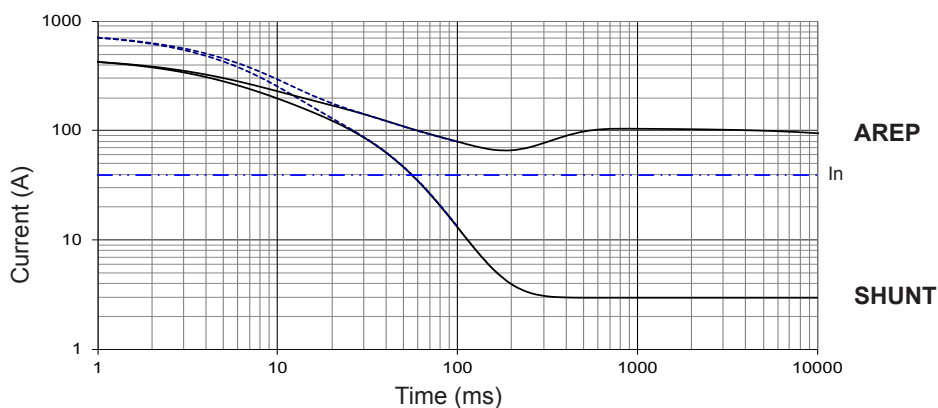
LSA 42.3 VS1

Symmetrical —
Asymmetrical - - -



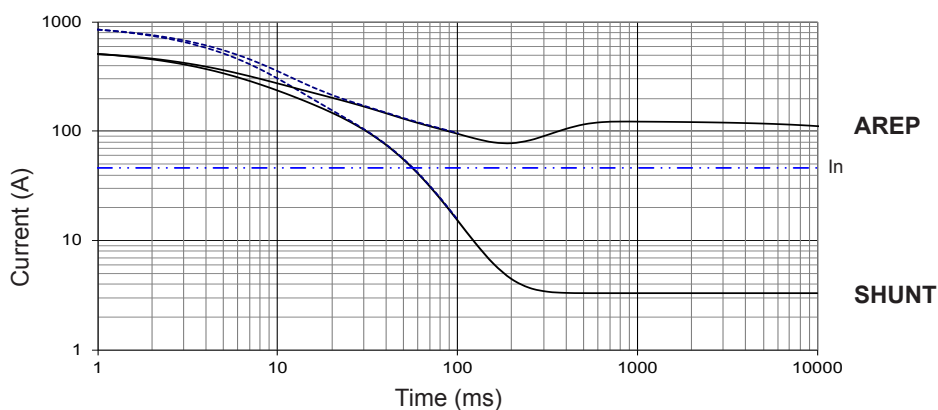
LSA 42.3 VS2

Symmetrical —
Asymmetrical - - -



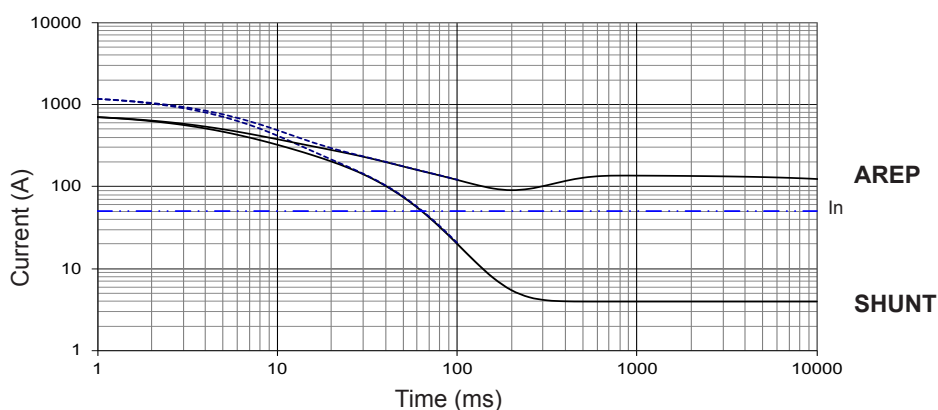
LSA 42.3 VS3

Symmetrical —
Asymmetrical - - -



LSA 42.3 S4

Symmetrical —
Asymmetrical - - -



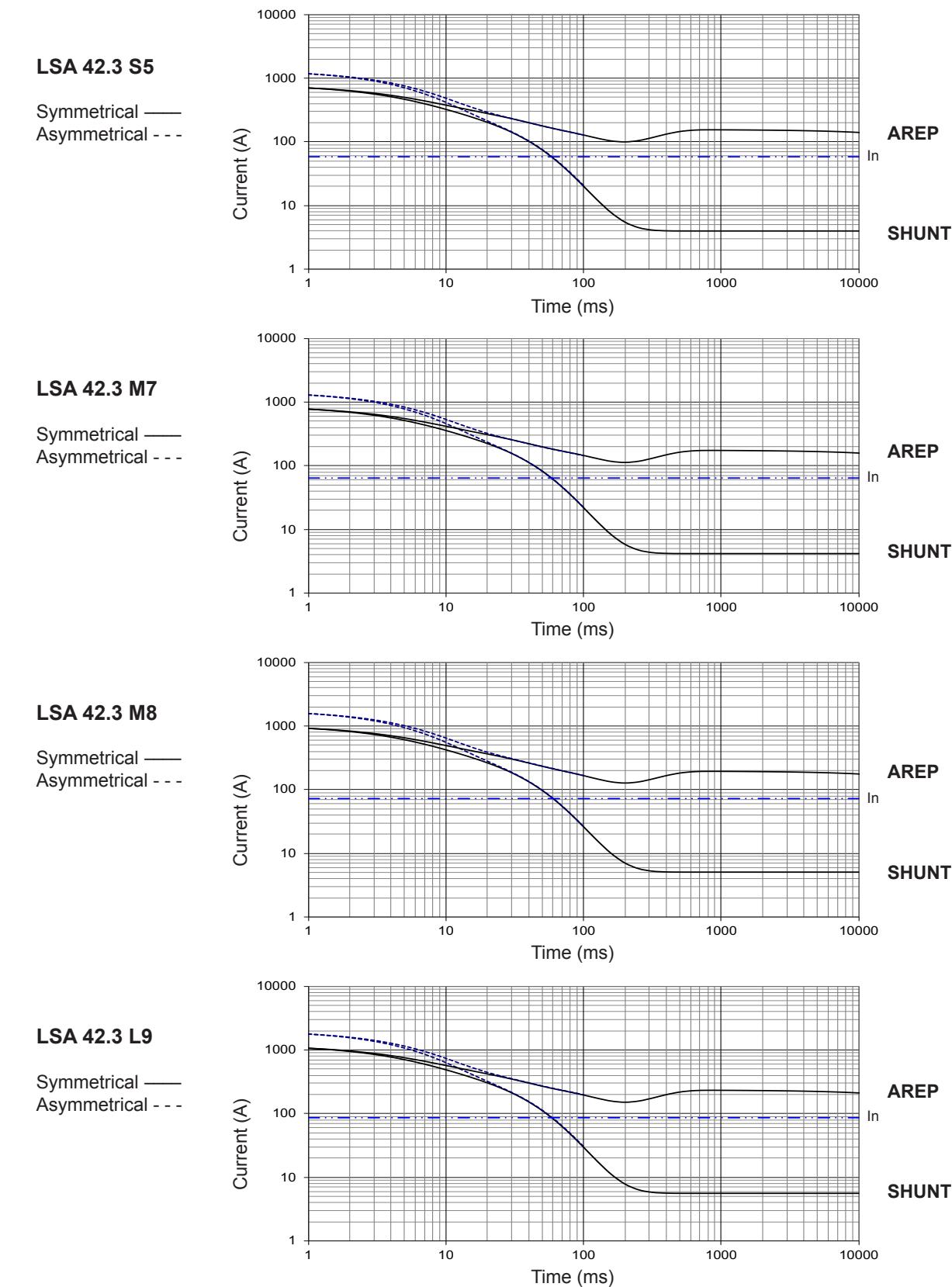
Influence due to connection

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

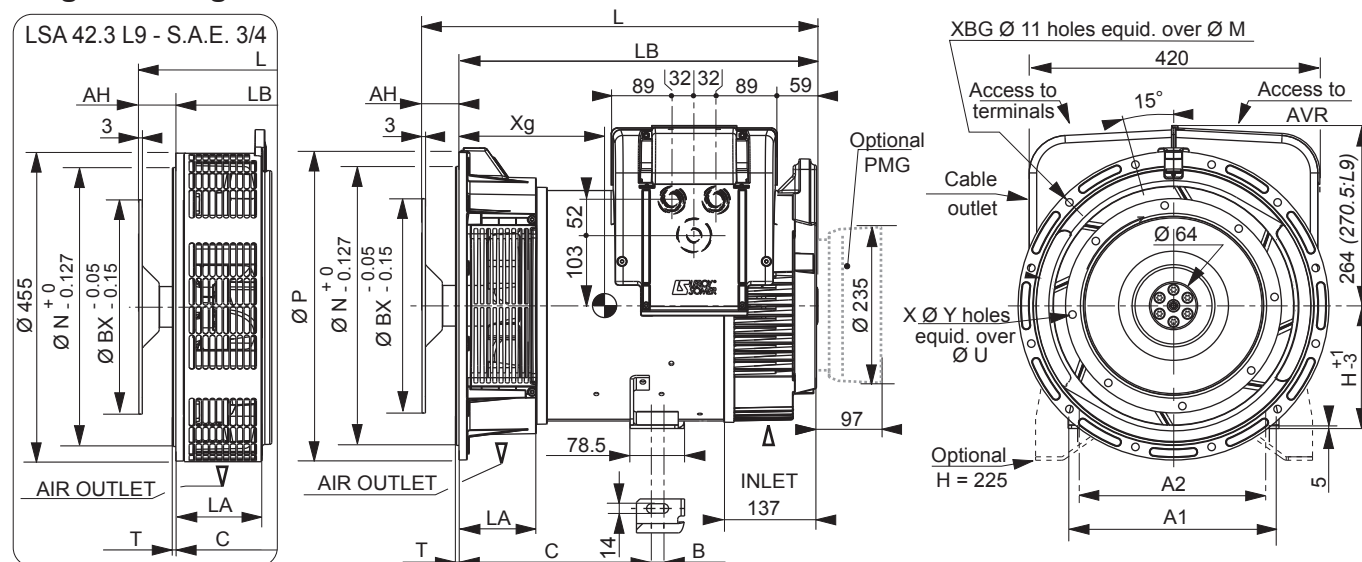
3-phase short-circuit curves at no load and rated speed (star connection Y)



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.

Single bearing dimensions

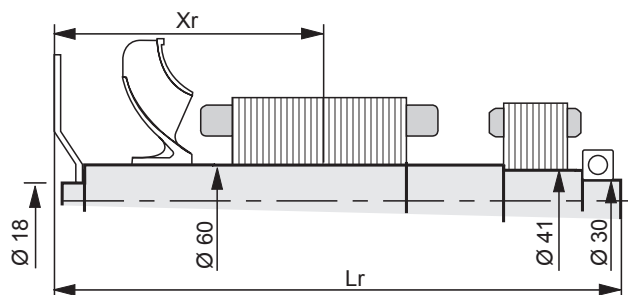


Dimensions (mm) and weight					H = 180 (Standard)				H = 225 (Option)				Coupling			
Type	L without PMG maxi*	LB	Xg	Weight (kg)	C	B	A1	A2	C	B	A1	A2	Flange	2	3	4
LSA 42.3 VS1	565	503	237	117	260	18	307	279	299	23	400	356	Flex plate			
LSA 42.3 VS2	565	503	242	122	260	18	307	279	299	23	400	356	11 1/2	x	x	-
LSA 42.3 VS3	565	503	252	133	260	18	307	279	299	23	400	356	10	x	x	x
LSA 42.3 S4	610	548	275	165	260	18	307	279	312.5	23	400	356	8	-	x	x
LSA 42.3 S5	610	548	275	165	260	18	307	279	312.5	23	400	356	7 1/2	-	x	x
LSA 42.3 M7	650	588	287	181	260	18	307	279	312.5	23	400	356				
LSA 42.3 M8	650	588	295	186	260	18	307	279	312.5	23	400	356				
LSA 42.3 L9**	680	618	310	187	260	18	307	279	312.5	23	400	356				
LSA 42.3 L9***	703	641	300	195	283	18	307	279	335.5	23	400	356				

* L maxi = LB + AH maxi ** S.A.E. 3 *** S.A.E. 4

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

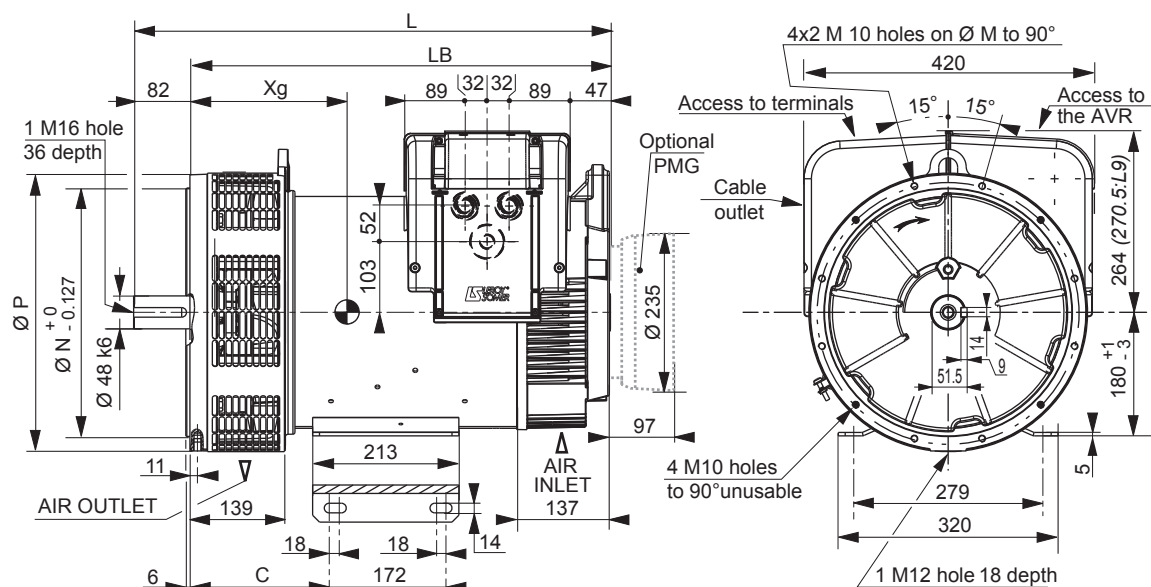
Torsional analysis data



Centre of gravity: Xr (mm), Rotor length: Lr (mm), Weight: M (kg), Moment of inertia: J (kgm²): (4J = MD²)															
Flex plate				S.A.E. 7 1/2				S.A.E. 8				S.A.E. 10			
Type	Xr	Lr	M	J	Xr	Lr	M	J	Xr	Lr	M	J	Xr	Lr	M
LSA 42.3 VS1	279	526.2	45.36	0.2209	277	558	45.68	0.2246	274	549.8	46.13	0.2363	272	535.6	46.62
LSA 42.3 VS2	282	526.2	47.36	0.2337	280	558	47.68	0.2374	277	549.8	48.13	0.2491	274	535.6	48.62
LSA 42.3 VS3	287	526.2	51.41	0.2592	286	558	51.73	0.2629	283	549.8	52.18	0.2746	281	535.6	52.67
LSA 42.3 S4	310	571.2	61.49	0.317	308	603	61.81	0.3207	306	594.8	62.26	0.3324	304	580.6	62.75
LSA 42.3 S5	310	571.2	61.49	0.317	308	603	61.81	0.3207	306	594.8	68.18	0.3645	304	580.6	62.75
LSA 42.3 M7	325	611.2	67.41	0.3491	323	643	67.73	0.3528	321	634.8	68.18	0.3645	319	620.6	68.67
LSA 42.3 M8	330	611.2	70.42	0.3683	328	643	70.74	0.372	326	634.8	71.18	0.3837	324	620.6	71.68
LSA 42.3 L9	344	641.2	77.49	0.4141	342	673	77.81	0.4178	340	664.8	78.25	0.4295	338	650.6	78.75

NOTE : Dimensions are for information only and may be subject to modifications. Contractual 2D drawings can be downloaded from the Leroy-Somer site, 3D drawing files are available upon request.
The torsional analysis of the transmission is imperative. All values are available upon request.

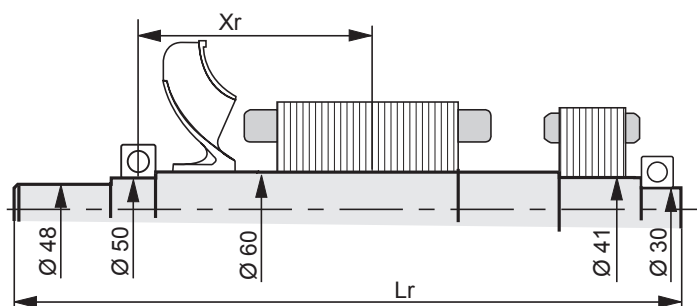
Two bearing dimensions



Dimensions (mm) and weight

Type	L without PMG	LB	N	M	P	C	Xg	Weight (kg)
LSA 42.3 VS1	610	528	361.95	381	406	189.25	242	129
LSA 42.3 VS2	610	528	361.95	381	406	189.25	247	134
LSA 42.3 VS3	610	528	361.95	381	406	189.25	257	145
LSA 42.3 S4	655	573	361.95	381	406	202.75	280	170
LSA 42.3 S5	655	573	361.95	381	406	202.75	280	170
LSA 42.3 M7	695	613	361.95	381	406	202.75	292	185
LSA 42.3 M8	695	613	361.95	381	406	202.75	300	190
LSA 42.3 L9	725	643	409.58	428.62	455	202.75	314	207

Torsional analysis data



Centre of gravity: Xr (mm), Rotor length: Lr (mm), Weight: M (kg), Moment of inertia: J (kgm²): (4J = MD²)

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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