



PetroSA

Specification Data Sheet

Reciprocating Compressor

00-15001-**-A042 (REV 02)

DOC. No.: 51-KR101-**-A001

REV.: 01B DATE: 07-Jan-26

SHEET : 1 OF 4 JOB NO.:

MFD NUMBER: 5113002**D258

ITEM NO. 51KR101 - LPG COMPRESSOR

P.O. NO.:

MFG.:

1						
2	NOTE: <input type="radio"/> INDICATES INFORMATION TO BE COMPLETED BY PURCHASER.					
3	<input type="checkbox"/> BY VENDOR					
4	CLIENT: PETROSA	SITE:		BLENDING & STORAGE		
5	UNIT: 51	SERVICE:		LPG		
6	NO. REQ'D.: 1	DRIVER TYPE:		SUPPLIED BY: <input type="radio"/> COMPR. MFR. <input type="radio"/> PURCHASER <input type="radio"/>		
7	MFR.	MFR. TYPE:		SERIAL NO.:		
8	COMPR. THROWS: NO. F	MAX. NO. POSS.:	MAX. FRAME POWER	KW AT MAX. RPM.	KW AT RATED RPM.	
9	COMPR. RPM. MAX.:	RATED:	MIN.:	DRIVER RATED RPM.:	RATED POWER KW	
10	<input type="checkbox"/> RATED OPERATING CONDITIONS (EACH MACHINE)				APPLICABLE SPECIFICATIONS	
11	SERVICE/ITEM NO.	LPG/ 51KR101	MIN	AVG	MAX	<input type="radio"/>
12	STAGE	SINGLE				<input type="radio"/>
13	GAS COMPRESSED	LPG				<input type="radio"/>
14	CORROSIVE DUE TO					<input type="radio"/> s
15	RELATIVE HUMIDITY					
16	MOL. WGT. AT INTAKE	46	44	46	58	
17	C _p /C _v VALUE AT SUCTION					
18	C _p /C _v VALUE AT DISCHARGE					
19	INLET TEMP °C	40				
20	INLET PRESSURE kPa abs.	1070				
21	MIN. ΔP BETWEEN STGS. kPa					
22	DESIGN DISCH. TEMP. °C	177				
23	DISCHARGE PRESS. DESIGN kPa abs.	2400				
24	Z @ SUCTION					
25	Z @ DISCHARGE					
26	EXPECTED CAPACITY: (TOLERANCE ± 3% ; POWER TOLERANCE ± 3%)					
27	WEIGHT kg/h					
28	INLET (CORRECTED) Nm ³ /h	49	26	49	61	
29	NORMAL (0° & 101.325 kPa) m ³ /h					
30	POWER/STAGE kW					
31	TOTAL POWER (WV-BELT LOSS) kW					
32	CAPACITY RATED PER API**: (TOLERANCE -0% ; POWER TOLERANCE +0%)					
33	WET kg/h					
34	INLET (CORRECTED) m ³ /h					
35	NORMAL (0° & 101.325 kPa) m ³ /h					
36	POWER/STAGE kW					
37	TOTAL POWER (WV-BELT LOSS) kW					
38	TOTAL POWER REQ'D. BY DRIVER (W/GEAR LOSS INCLUDED)					
39	<input type="checkbox"/> CAPACITY CONTROL					
40	TO PERMIT OPERATION					CAPACITY CONTROL SHALL BE
41	AT AN INLET CAP. OF m ³ /h					<input type="radio"/> VARIABLE SPEED TO % RATED.
42	POCKETS/VALVES OPEN*					<input type="radio"/> PURCHASERS BY-PASS.
43	INLET PRESSURE kPa abs.					<input type="radio"/> MFR. STANDARD AUTOMATIC CONTROL
44	DISCHARGE PRESS. kPa abs.					<input type="radio"/> START/STOP <input type="radio"/> (2)(3)(5) STEP
45	ACTUAL DISCH. TEMP. °C					<input type="radio"/> PILOTED BY REC. PRESS
46	POWER/STAGE kW					<input type="radio"/> PILOTED BY PURCH. PRESS
47	TOTAL POWER kW					W/ bar AIR SIGNAL.
48	TO PERMIT OPERATION					<input type="radio"/> CLEARANCE POCKETS, CYL.
49	AT AN INLET CAP. OF m ³ /h					<input type="radio"/> FIXED <input type="radio"/> VARIABLE
50	POCKETS/VALVES OPEN*					<input type="radio"/> MANUAL <input type="radio"/> MANUAL PNEU. <input type="radio"/> AUTO.
51	INLET PRESSURE kPa abs.					<input type="radio"/> SUCT. VALVE UNLOADERS. CYL.
52	DISCHARGE PRESS. kPa abs.					TYPE: <input type="radio"/> PLUG <input type="radio"/>
53	ACTUAL DISCH. TEMP. °C					<input type="radio"/> MANUAL <input type="radio"/> MANUAL PNEU. <input type="radio"/> AUTO.
54	POWER/STAGE kW					ON AIR/POWER FAILURE COMPRESSOR.
55	TOTAL POWER kW					SHALL <input type="radio"/> UNLOAD <input type="radio"/> LOAD.
56	*S = SUCTION VALVE UNLOADERS H = HEAD END C = CRANK END F = FIXED POCKET OPEN V = VARIABLE POCKET OPEN.					
57	**SEE A.P.I. PAR. 55 (NO NEGATIVE TOLERANCE, ETC.)					
58	REMARKS: REFER TO TECHNICAL SPECIFICATION FOR MORE DETAILED INFORMATION					
59	CURRENT REVISIONS ARE NOTED IN BOLD.					
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NOTE: HYDRAULIC POWER AND MOTOR / COMPRESSOR EFFICIENCY TO BE CONFIRMED WITH THE SUPPLIER.

01B	06-May-26	FOR ENQUIRY PER - P051.1302	BADEM	J.P.P.	EE	Km
01A	06-Jan-26	FOR ENQUIRY PER - P051.1302	BA	JPP	DRM	EE KM
Rev	Date	Description	Orig	Chk'd	Lead Eng	E & I Eng. App.
REVISIONS			APPROVALS			

PetroSA SOUTH AFRICA



Specification Data Sheet
Reciprocating Compressor
00-15001-**-A042 (REV 02)

DOC. No.:	51-KR101-**-A001		
REV.:	01B	DATE:	07-Jan-26
SHEET:	2 OF 4	JOB NO.:	
MFD NUMBER:	5113002**D258		
ITEM NO.:	51KR101 - LPG COMPRESSOR		
P.O. NO.:			
MFG.:			

1		GAS ANALYSIS		RATED OPERATING CONDITIONS				REMARKS
2	<input type="radio"/> MOL. % <input type="radio"/>		DESIGN CASE					
3		M.W.						
4	AIR	28.966	0.00					
5	OXYGEN	32.000	0.00					
6	NITROGEN	28.016	0.00					
7	WATER VAPOUR	18.016	0.00					
8	CARBON MONOXIDE	28.010	0.00					
9	CARBON DIOXIDE	44.010	0.00					
10	HYDROGEN SULFIDE	34.076	0.00					
11	HYDROGEN	2.016	0.00					
12	METHANE	16.042	<0.01					
13	ETHYLENE	28.052	<0.01					
14	ETHANE	30.068	0.20					
15	PROPYLENE	42.078	0.43					
16	PROPANE	44.094	76.06					
17	i-BUTANE	58.120	7.45					
18	n-BUTANE	58.120	15.56					
19	i-PENTANE	72.146	0.02					
20	n-PENTANE	72.146	0.00					
21	HEXANE PLUS							
22	C +		0.02					
23	Total C2 Hydrocarbons		0.2					
24								
25								
26								
27								
28	TOTAL							
29	AVG. MOL. WT.							
30	REMARKS:							
31	NOTES:							
32	(1) CURRENT REVISIONS ARE NOTED IN BOLD.							
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42	SKETCH:							
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01B	06-May-26	FOR ENQUIRY PER - P051.1302	BA	JPP	DRM	EE	KM
01A	06-Jan-26	FOR ENQUIRY PER - P051.1302	BA	JPP	DRM	EE	KM
Rev	Date	Description	Orig	Chk'd	Lead Eng	E & I Eng	App.
VISIONS							APPROVALS





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Specification Data Sheet

Reciprocating Compressor

00-15001-**-A042 (REV 02)

DOC. No.: 51-KR101-**-A001

REV.: 01B DATE: 07-Jan-26

SHEET: 3 OF 4 JOB NO.:

MFD NUMBER: 5113002**D258

ITEM NO.: 51KR101 - LPG COMPRESSOR

P.O. NO.:

MFG.:

CYLINDER DATA			COMPRESSOR PACKING		
1					
2	ITEM NO./SERVICE	51KR101/LPG			<input type="radio"/> FULL FLOATING VENTED PACKING
3	STAGE				W/STAINLESS STEEL SPRINGS:
4	NO. OF CYL. PER STAGE				<input type="radio"/> FORCED FEED LUBRICATED:
5	TYPE CYL. COOLING REQ'D.				<input type="radio"/> NON-LUBRICATED <input type="radio"/> TEFLON <input type="radio"/> CARBON:
6	TYPE CYL. (STEP)(TANDEM)				<input type="checkbox"/> WATER COOLED:
7	SINGLE/DOUBLE ACTING				<input type="radio"/> PROVISIONS FOR FUTURE (WATER)(OIL)
8	CYLINDER LINER YES/NO				COOLING:
9	CYLINDER LINER WET/DRY				<input type="radio"/> VENTED TO:
10	OUTSIDE DIAM. LINER	mm			
11	BORE	mm			DISTANCE PIECE
12	STROKE	mm			<input type="radio"/> STANDARD:
13	PISTON DISPLACEMENT	m ³ /h			<input type="radio"/> EXTRA LONG SINGLE COMPARTMENT:
14	CLEARANCE	%			<input type="radio"/> TWO COMPARTMENT:
15	VOLUMETRIC EFFICIENCY	%			<input type="radio"/> SOLID COVER <input type="radio"/>
16	API VALVE GAS VELOCITY	m/s			<input type="radio"/> VENTED TO:
17	NO. INLET/DISCH. VALVE/CYL.				<input type="radio"/> DESIGN PRESS: kPag
18	TYPE OF VALVES				LUBRICATION
19	INLET/DISCH. VALVE LIFT	mm			FRAME:
20	MAX. ALLOW PISTON SPEED	m/s			<input type="radio"/> SPLASH SYSTEM
21	NORMAL PISTON SPEED	m/s			<input type="radio"/> PRESSURE SYSTEM (INCLUDE THE FOLLOWING):
22	ROD DIAMETER	mm			<input type="radio"/> MAIN OIL PUMP DRIVEN BY: PUMP SHAFT <input type="checkbox"/>
23	MAX. ALLOW. ROD LOADING T	N			ELEC. MOTOR <input type="checkbox"/>
24	MAX. ALLOW. ROD LOADING C	N			<input type="radio"/> AUX. OIL PUMP DRIVEN BY ELECTRIC MOTOR
25	ACTUAL ROD LOAD, T (GAS LOAD)	N			<input type="radio"/> HAND OPERATED PUMP FOR STARTING
26	ACTUAL ROD LOAD, C (GAS LOAD)	N			<input type="checkbox"/> SYSTEM OIL CAPACITY: LITRES
27	ACTUAL ROD LOAD, T (GAS & INERTIA)	N			<input type="checkbox"/> TYPE OIL: GREASE:
28	ACTUAL ROD LOAD, C (GAS & INERTIA)	N			<input type="radio"/> ELEC. HTR. W/THERMOSTAT <input type="radio"/> STEAM COIL
29	DEGREES ROD REVERSAL				TYPE BEARINGS: <input type="checkbox"/> SLEEVE <input type="checkbox"/> BALL <input type="checkbox"/>
30	MAX. ALLOW. CYL. WKG. PRESS.	kPag			BRG. MATL.: <input type="checkbox"/> ALUM. <input type="checkbox"/> BABBIT <input type="checkbox"/>
31	MAX. ALLOW. CYL. TEMP.	°C			<input type="checkbox"/> OUTBOARD BEARING INCLUDED <input type="checkbox"/> TYPE:
32	RECOM. RELIEF VALVE	kPag			CYLINDERS:
33	HYDROSTATIC TEST	kPag			LUBRICATOR TO BE DRIVEN BY:
34	SUCTION SIZE/RATING				<input type="radio"/> COMPRESSOR SHAFT <input type="radio"/> ELECTRIC MOTOR <input type="radio"/> BOTH
35	FACING				LUBRICATOR CAPACITY: <input type="radio"/> 24 HOUR <input type="radio"/> LITRES
36	DISCH. SIZE/RATING				<input type="checkbox"/> TYPE OIL: GREASE:
37	FACING				<input type="checkbox"/> LUBRICATOR MAKE: MODEL:
38	POSITION FROM DRIVER ENC*				<input type="radio"/> STEAM COIL: <input type="checkbox"/> NO. OF COMP.:
39					<input type="radio"/> ELECTRIC HEATER W/THERMOSTAT
40	CYLINDERS, HEAD, DISTANCE PIECE & CROSSHEAD GUID	DUCTILE IRON: ASTM A536			BARRING DEVICE: <input type="radio"/> MANUAL <input type="radio"/> PNEU.
41	CONNECTING ROD	DUCTILE IRON: ASTM A536, STEEL			<input type="checkbox"/> COUPLING - LOW SPEED
42	PISTONS	STEEL			MFR.: MODEL:
43	PISTON RINGS	CARBON FILLED PTFE			TYPE:
44	CROSSHEAD	GRAY IRON: ASTM A48			<input type="checkbox"/> COUPLING - HIGH SPEED
45	PISTON RODS	FEEL, BLACK SURFACE TO 60			MFR.: MODEL:
46	CRANKSHAFT	DUCTILE IRON: ASTM A48			TYPE:
47	VALVE SEATS	HARDENED STEEL			<input type="checkbox"/> COUPLING - (MAIN)(AUX) OIL PUMP
48	VALVE STOPS	HARDENED STEEL			MFR.: MODEL:
49	VALVE PLATES	STAINLESS STEEL			TYPE:
50	VALVE SPRINGS	STAINLESS STEEL			TYPE GUARDS <input type="radio"/> CODE <input type="radio"/> STANDARD <input type="radio"/> NON-SPARK
51	ROD PACKING	PTFE V-RINGS			<input type="radio"/> STATIC COND. V-BELTS <input type="radio"/> TOT. V-BELT GUARD
52	CRANCKCASE	IRON			AIR INTAKE FILTER BY: <input type="radio"/> MFR. <input type="radio"/> PURCH
53	FLYWHEEL, BEARING CARRIER	GRAY IRON: ASTM A48			<input type="checkbox"/> MFR.: MODEL:
54	BUSHING, WRIST PIN	BRONZE SLEEVE			<input type="checkbox"/> TYPE: <input type="radio"/> OUTLET CONNECTION
55	METAL GASKETS	ALUMINIUM			
56	OTHER GASKETS	FIBER			
57	O-RINGS	BUNA-N			
58	* OR FLYWHEEL	RH = RIGHT HAND LH = LEFT HAND OB = OUTBOARD IB = INBOARD			
59	NOTES:				
60	(1) CURRENT REVISIONS ARE NOTED IN BOLD.				

01B	06-May-26	FOR ENQUIRY PER - P051.1302	BA	JPP	DRM	EE	KM
01A	06-Jan-26	FOR ENQUIRY PER - P051.1302	BA	JPP	DRM	EE	KM
Rev	Date	Description	Orig	Chk'd	Lead Eng	E & I Eng.	App.

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00-15001-**-A042 (REV 02)

DOC. No.: **51-KR101-**-A001**

REV.: **01B** DATE: 07-Jan-26

SHEET : 4 OF 4 JOB NO.:

MFD NUMBER: 5113002**D258

ITEM NO.: 51KR101 - LPG COMPRESSOR

P.O. NO.:

MFG.:

<input type="radio"/> SITE DATA				<input type="checkbox"/> UTILITY CONSUMPTION			
2	ALTITUDE:	m. BAROMETER:	kPa abs.	ELECTRIC:		LOCKED	FULL LOAD
3	DESIGN TEMP.:	°C SUMMER	°C WINTER MIN.	kW	ROTOR AMPS		AMPS
4	DESIGN WET BULB TEMP.:	°C		MAIN DRIVER			
5	<input type="radio"/> WINTERIZATION REQ'D.: <input type="radio"/> TROPICALIZATION REQ'D.:			MAIN LUBE OIL PUMP			
6	UNUSUAL CONDITIONS: <input type="radio"/> DUST <input type="radio"/> FUMES			AUX. LUBE OIL PUMP			
7	<input type="radio"/> OTHER:			PKG. COOLANT OIL PUMP			
8	EQUIPMENT SHALL BE SUITABLE FOR:			MECH. LUBRICATOR			
9	<input type="radio"/> INDOORS <input type="radio"/> HEATED <input type="radio"/> UNHEATED						
10	<input type="radio"/> OUTDOORS <input type="radio"/> UNDER ROOF <input type="radio"/> WITHOUT ROOF			FRAME OIL HEATER	WATTS	VOLTS	Hz
11	ELECTRICAL EQUIPMENT HAZARD ZONE:			LUBR. HEATER	WATTS	VOLTS	Hz
12	COOLING WATER FOR COMP. CYLINDERS:			SPACE HEATER	WATTS	VOLTS	Hz
13	TYPE WATER:				WATTS	VOLTS	Hz
14	PRESS.:	kPag. SUPPLY:	kPag. RETURN MIN.	STEAM:			
15	TEMP.:	°C. SUPPLY:	°C. RETURN MAX.	MAIN DRIVER	kg/h	kPag	°C to bar
16	COOLING WATER FOR (OIL COOLER)(INTERCOOLERS)(ROD PKG):			LUBR. HEATER	kg/h	kPag	°C to bar
17	TYPE WATER:			FRAME HEATER	kg/h	kPag	°C to bar
18	PRESS.:	kPag. SUPPLY:	kPag. RETURN MIN.		kg/h	kPag	°C to bar
19	TEMP.:	°C. SUPPLY:	°C. RETURN MAX.	COOLING WATER:			
20	ELECTRIC POWER FOR HEATERS:			COMP.			
21	VOLTS	PHASE	HERTZ		CYL.	ROD	L.O.
22	STEAM FOR HEATERS:			JKTS.	PKG.	COOLER	INTER
23	NORMAL:	kPag	°C	QUANTITY	m ³ /h		
24	MAX.:	kPag	°C	INLET TEMP.	°C		
25	INSTRUMENT AIR SUPPLY:			OUTLET TEMP.	°C		
26	PRESS.:	kPag MAX.	kPag NORMAL	INLET PRESS.	kPag		
27				OUTLET PRESS.	kPag		
28				MAX. PRESS.	kPag		
29				TOTAL C.W.	m ³ /h		
30	INSPECTION AND SHIP TESTS			ALARMS AND SHUTDOWNS			
31		REQUIRED	WITNESSED	COMP. MFR. SHALL FURNISH ELEC. SEPARATE CONTRACTS FOR:			
32	SHOP INSPECTION	<input type="radio"/>	<input type="radio"/>	PRE-ALARM SHUTDOWN			
33	MFR. STANDARD SHOP TEST.	<input type="radio"/>	<input type="radio"/>	LOW LUBE OIL PRESSURE	<input type="radio"/>	<input type="radio"/>	
34	VALVE LEAK TEST	<input type="radio"/>	<input type="radio"/>	LOW MECH. LUBR. OIL LEVEL	<input type="radio"/>	<input type="radio"/>	
35	CYL. HYDRO. TEST	<input type="radio"/>	<input type="radio"/>	HIGH COMP. J.W. TEMP.:	°C	<input type="radio"/>	<input type="radio"/>
36	HYDRO. CYL. WATER JKTS.:	kPag	<input type="radio"/>	HIGH LEVEL IN EACH MOIST. SEP.		<input type="radio"/>	<input type="radio"/>
37	CYL. HELIUM LEAK TEST	MWP	<input type="radio"/>	HIGH GAS DISCH. TEMP.:	°C	<input type="radio"/>	<input type="radio"/>
38	BAR OVER TO CHECK RUNOUT ETC.	<input type="radio"/>	<input type="radio"/>	LOW GAS SUCT. PRESS.:	kPag	<input type="radio"/>	<input type="radio"/>
39	MECH. RUN TEST W/SHOP DRIVER	<input type="radio"/>	<input type="radio"/>	HIGH VIBRATION		<input type="radio"/>	<input type="radio"/>
40	MECH. RUN TEST W/JOP DRIVER	<input type="radio"/>	<input type="radio"/>	COMP. MAIN BEARINGS HIGH TEMP.		<input type="radio"/>	<input type="radio"/>
41	AUX. EQUIP. OPER. TEST	<input type="radio"/>	<input type="radio"/>	REMOTE SHUTDOWN: <input type="radio"/> ELEC. <input type="radio"/> PNEUMATIC <input type="radio"/> HYDR.			
42	DISMANTLE-REASSEMBLE INSPECTION	<input type="radio"/>	<input type="radio"/>	PRE-ALARM CONTACTS SHALL: <input type="radio"/> OPEN <input type="radio"/> CLOSE TO SOUND ALARM			
43		<input type="radio"/>	<input type="radio"/>	SHUTDOWN CONTACTS SHALL: <input type="radio"/> OPEN <input type="radio"/> CLOSE TO SHUTDOWN			
44		<input type="radio"/>	<input type="radio"/>	<input type="radio"/> CONTROL CURRENT 525 VOLTS 3 PHASE 50 HERTZ			
45	PAINTING			SWITCH ENCLOSURE: <input type="radio"/> EXP. PROOF <input type="radio"/> WEATHERPROOF			
46	<input type="radio"/> MANUFACTURER'S STANDARD			<input type="radio"/> NEMA TYPE:			
47	<input type="radio"/> OTHER:						
48	SHIPMENT						
49	<input type="radio"/> DOMESTIC <input type="radio"/> EXPORT <input type="radio"/> EXPORT BOXING REQ'D.						
50	<input type="radio"/> OUTDOOR STORAGE OVER 6 MONTHS						
51	REMARKS:						
52							
53	NOTES:						
54	(1) CURRENT REVISIONS ARE NOTED IN BOLD.						
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01B	06-May-26	FOR ENQUIRY PER - P051.1302	BA	JPP	DRM	EE	KM
01A	06-Jan-26	FOR ENQUIRY PER - P051.1302	BA	JPP	DRM	EE	KM
Rev	Date	Description	Orig	Chk'd	Lead Eng	E & I Eng.	App.

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PetroSA SOUTH AFRICA