



OPERATOR MANUAL

THE VACUUM LIFTING COMPANY LTD SK1000 STONE VAC



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1. GENERAL

PLEASE NOTE THAT THE MANUFACTURER DISCLAIMS ANY RESPONSIBILITY FOR MATERIAL DAMAGE OR PERSONAL INJURY CAUSED BY IMPROPER USE OF THIS BATLIFT. THE OPERATOR MUST READ THIS MANUAL BEFORE USING THE DEVICE.

1.1. LIFTING SPECIFICATION

THE VACUUM LIFTING DEVICE IN COMBINATION WITH THE SUPPLIED SUCTIONPADS IS ONLY SPECIFIED FOR LIFTING OF THE MATERIALS SPECIFIED BELOW. THE LIFTER IS NOT SUITABLE FOR USE WITHIN HAZARDOUS/EXPLOSIVE ATMOSPHERES.

1.1.1 LOAD SPECIFICATION

A 1000 KG CAPACITY BATLIFT SYSTEM TO LIFT CONCRETE/STONE SLABS OR STEEL PLATES / SECTIONS WITH CRANE OR MINI-DIGGER:

LENGTH : MIN 900 MM WIDTH : MIN 450 MM
THICKNESS: VARIABLE MAX WEIGHT: 1000 KGS

SURFACE : FREE FROM DETRITUS THAT COULD IMPEDE EFFECTIVE SEALING, NO EXTREME IRREGULARITIES, GREASE OIL OR ANY CONTAMINANTS.

OPERATING TEMPERATURE : -20 TO 60 DEG. C

MAX. LIFT INCLINATION: TO 30 DEG. FROM HORIZONTAL

1.1.2 CONDITIONS

AMBIENT TEMP.: UP TO 40 DEG. C.

HOIST ACCELERATION : MAX 1 MS-2 LIFTING OR LOWERING

1.2 OPERATING SAFETY GUIDELINES

1.2.1 TRAINING

ENSURE THAT THE MACHINE IS ONLY OPERATED BY PERSONNEL WHO HAVE BEEN SATISFACTORILY TRAINED IN THE USE OF THE MACHINE AND FULLY UNDERSTAND THE OPERATING SAFETY GUIDELINES PRESENTED BELOW.

1.2.2 ALARM SYSTEM

THE MACHINE IS FITTED WITH AN AUDIBLE AND VISUAL ALARM INDICATION SYSTEM WHICH COMPRISES:

- 1 RED INDICATOR LAMP - VISUAL INDICATION OF VACUUM LEVEL BELOW 60%
- 1 AUDIBLE ENUNCIATOR - AUDIBLE INDICATION OF VACUUM LEVEL BELOW 60%

WITH THE MACHINE SWITCHED ON THE ALARM SYSTEM WILL ANNUNCIATE A LOW VACUUM ALARM CONDITION IF THE VACUUM LEVEL IS INITIALLY BELOW 60% OR SHOULD DROP BELOW 60%

TO TEST THE ALARM SYSTEM, ENSURE THAT THE STORED VACUUM RESERVOIR IS REDUCED TO ZERO - SWITCH ON THE MACHINE, THE ALARM SYSTEM WILL OPERATE UNTIL THE VACUUM LEVEL ACHIEVED IS ABOVE 60% - AT THIS POINT THE ALARM ANNUNCIATION WILL STOP AND THE SYSTEMS O.K. INDICATOR LAMP WILL ILLUMINATE. IF THE ALARM SYSTEM DOES NOT OPERATE AS DESCRIBED DO NOT USE THE MACHINE AND REPORT THE DEFECT IMMEDIATELY.

THE ALARM SYSTEM IS TO BE TESTED ON A DAILY BASIS BEFORE THE COMMENCEMENT OF LIFTING OPERATIONS.

DO NOT ATTEMPT TO LIFT A LOAD WITHOUT THE MACHINE SWITCHED ON IT IS DANGEROUS TO ATTEMPT TO LIFT A LOAD USING RESIDUAL VACUUM HELD WITHIN THE VACUUM RESERVOIR.

1.2.4 VACUUM GAUGE

THE MACHINE IS FITTED WITH A VACUUM GAUGE WHICH INDICATED THE LEVEL OF VACUUM ACHIEVED, THE GAUGE IS CALIBRATED FROM 0-100%. THE SCALING ON THE GAUGE HAS A SECTOR COLOURED GREEN FROM 40 - 70%, THIS INDICATES THE VACUUM LEVEL REQUIRED TO LIFT A MAXIMUM PERMISSIBLE LOAD OF 1000 KGS.

WHEN OPERATING THE VACUUM UNIT THE OPERATOR MUST HAVE A CLEAR VIEW OF THE VACUUM GAUGE AS THIS WILL GIVE AN EARLY INDICATION IN THE EVENT OF AN ABNORMAL DECREASE IN THE VACUUM LEVEL.

1.2.5 LIFTING OPERATIONS

DURING NORMAL OPERATION THE MACHINE MAY BE USED TO LIFT LOADS OF UP TO 1000 KG WHEN THE MACHINE HAS ACHIEVED A VACUUM LEVEL OF 60% OR ABOVE AS INDICATED BY THE VACUUM GAUGE. THE OPERATOR MUST HAVE CLEAR UNOBSTRUCTED VIEW OF THE VACUUM GAUGE TOGETHER WITH THE RED AND GREEN LAMPS.

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DO NOT ATTEMPT TO LIFT A LOAD OF 1000 KGS IF THE VACUUM GAUGE INDICATES LESS THAN 60%, OR IF AN ALARM CONDITION IS ANNUNCIATED

IF, WHIST LIFTING LOAD THE VACUUM LEVEL DROPS BELOW 60% OR AN ALARM CONDITION IS ANNUNCIATED , LOWER THE LOAD TO A SAFE POSITION IMMEDIATELY.

1.2.6 S.W.L.

THE MAXIMUM LIFTING CAPACITY IS INDICATED ON THE LIFTING DEVICE. ON THE SUCTION PADS THE MAXIMUM LIFTING CAPACITY IS ALSO INDICATED. THE MINIMUM S.W.L. VALUE SHOWN IS THE MAXIMUM S.W.L. FOR THIS UNIT.

THE A-WEIGHTED TIME AVERAGED EMISSION SOUND PRESSURE (LEQ) MEASURED AT A HORIZONTAL DISTANCE OF 1 M FROM THE CENTRE OF THE UNIT DOES NOT EXCEED 70 DB(A)

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**IT IS FORBIDDEN TO BE
UNDER OR IN PROXIMITY OF
THE LOAD!!!**

**PLEASE ENSURE THAT LIFTED
LOAD IS NOT CARRIED OVER
PERSONNEL!!!**

CERTIFIED

2. INSTALLATION INSTRUCTIONS

SEE ILLUSTRATION OF LIFTER

2.1 FITTING BATLIFT

THE UNIT IS FITTED WITH TOPLIFTPOINT/SHACKLE - PLS. NOTE THE FOLLOWING; THE HOOK SIZE SHOULD MATCH THE LIFTING TACKLE
THE LIFTING CAPACITY OF THE GANTRY CRANE SHOULD BE SUFFICIENT FOR THE SUM LOADING OF LIFTER AND LOAD $45 + 1000 \text{ KGS} = 1045 \text{ KGS}$.

IF THE CAPACITY OF THE LIFTING GEAR IS MUCH HIGHER THAN LIFTER CAPACITY OF THE LIFTER THEN CARE SHOULD BE TAKEN THAT ACCELERATION TIME DOES NOT EXCEED 1 METRE/SEC².

2.2. SUCTION PADS

THE DEVICE IS EQUIPPED WITH 1 OFF 900 X 450 MM MM STEEL SUCTIONPAD - WITH A CAPACITY OF 1000 KGS @ MAX VACUUM 60%.

3. DIRECTIONS FOR USE

3.1 GENERAL

THE UNIT IS SUPPLIED WITH A MANUALLY OPERATED CONTROL VALVE SEE UNIT ILLUSTRATION.

3.2 OPERATING THE UNIT

SWITCH UNIT ON BY PRESSING THE GREEN OFF/ON SWITCH AS ILLUSTRATED - THE UNIT WILL START IMMEDIATELY - ENSURE THE VALVE IS IN OFF POSITION AS SHOWN (VALVE SLID UP TO TOP POSITION) AND ALLOW VACUUM TO BUILD UP UNTIL THE ALARM STOPS AND THE GREEN LAMP FLASHES.



SAFE LIFTING IS ONLY POSSIBLE WHEN THE LOAD IS CORRECTLY DIVIDED OVER THE SUCTION PAD - THE UNIT SHOULD BE CENTRED ON PANEL TO BE LIFTED. UNIT IS THEN LOWERED ONTO PANEL ENSURING THAT THE PAD DOES NOT OVERLAP MATERIAL BEING LIFTED AND THAT IT IS PRESSED AGAINST PANEL.

TO ACTIVATE CONTROL VALVE - SLIDE SILVER SLIDE VALVE , VACUUMIZATION OF PAD TAKES PLACE WITHIN 1 SECOND. WHEN RELEASING PANEL OPERATOR MUST ENSURE THAT IT IS ADEQUATELY SUPPORTED AND HE IS WELL CLEAR OF ANY POSSIBLE MATERIAL SHIFT AFTER DEACTIVATING THE SUCTIONPADS.

BEFORE LIFTING A LOAD PLEASE NOTE THE FOLLOWING:

- A) IS THE UNIT CAPACITY ADEQUATE FOR THE LOAD?**
- B) IS THE LENGTH OF THE LOAD WITHIN 600 MM? AND THE WIDTH WITHIN 250MM**
- C) IS THE SURFACE OF THE PANEL FREE FROM DIRT/SWAF THAT COULD AFFECT SEALING??**
- D) IS THE SURFACE FREE FROM FLAWS/HOLES ETC THAT COULD PREVENT THE PAD FROM SEALING**

IMPORTANT - YOU ARE ONLY ALLOWED TO LIFT A 1000 KGS LOAD IF THE VACUUM IS ABOVE 60% AND VK90/45 PAD IS FITTED . MAKE SURE THAT THE VACUUM IS NOT DECREASING WHILST LIFTING - WATCH THE VACUUM GAUGE..

3.3 DISCONNECTING

3.3.1. SWITCHING OFF

TURN THE ISOLATOR SWITCH TO OFF ON UNIT.

CHARGING

ENSURE THAT THE UNIT IS SWITCHED OFF!!!!. PLUG IN THE SUPPLIED CHARGER. THE UNIT IS FITTED WITH AN AUTOMATIC CHARGING SYSTEM AUTOMATICALLY TIMED TO PROVIDE THE CORRECT CHARGE PERIOD.

N.B. WE ACCEPT NO LIABILITY FOR DAMAGE TO GEL BATTERIES OR CHARGING SYSTEM THRU' MISUSE OR UNDER/OVER CHARGING. GEL BATTERIES SHOULD BE TREATED AS A CONSUMABLE ITEM AND ARE NOT COVERED BY GUARANTEE.

3.3.2. STORAGE

WHEN UNIT IS NOT BEING USED YOU ARE ADVISED TO KEEP THE SUCTION PADS OFF THE FLOOR WHEN WET.

FOR LONG TERM STORAGE THE BATTERIES SHOULD BE CHARGED ONCE A WEEK WITH ON-BOARD CHARGING SYSTEM AND THE UNIT SHOULD BE STORED IN A DRY ROOM.

4. MAINTENANCE

CHECK RUBBER SEALS FOR LOCALIZED DAMAGE & WEAR. BADLY WORN & DAMAGED SEALS SHOULD BE REPLACED PRIOR TO USE. NEW SEALS CAN BE INSERTED INTO SEAL PROFILE USING INSERT BAR AT AN ANGLE OF 45 DEG.

CHECK THAT ALARM SYSTEM IS OPERATING CORRECTLY(IF FITTED) - WARNING SIREN SHOULD STOP AFTER 60% REACHED IN RESERVOIR(VACUUM GAUGE). IF ALARM IS NOT WORKING IT SHOULD BE REPAIRED IMMEDIATELY.

CHECK THE SUSPENSION POINTS FOR DAMAGE.

4.2 WEEKLY CHECKS

CHECK FILTER ELEMENT ON FILTER BETWEEN RESERVOIR & VALVE IS CLEAN - IF FITTED -IF NECESSARY CLEAN OR RENEW. PARTICULARLY MOIST OR DUSTY ATMOSPHERES WILL REQUIRE MORE FREQUENT ATTENTION.

CHECK INTEGRITY OF AIR FILTER HOUSING.

CHECK LEGIBILITY OF ALL WARNING & INFORMATION LABELS.

CHECK VACUUM RESERVOIR FOR WATER - REMOVE GAUGE AND TURN UPSIDE DOWN.

CHECK FILTER ELEMENT ON VACUUM PUMP(IF FITTED) - IF DIRTY, CLEAN OR EXCHANGE.

CHECK INTEGRITY OF AIR FILTER HOUSING

CHECK LEGIBILITY OF ALL WARNING & INFORMATION LABELS.

4.3. MONTHLY MAINTENANCE

INSPECT SHACKLES & SUSPENSION POINTS EVERY MONTH. WHEN THE CROSS SECTION IS REDUCED BY OVER 10% - THE PARTS SHOULD BE REPLACED IMMEDIATELY

5. TROUBLE SHOOTING

5.1. VACUUM SYSTEM

A. VACUUM PERCENTAGE IS BELOW 60%

**CAUSE: LEAKAGE IN THE VACUUM HOSES OR BADLY APPLIED HOSE CLIPS;
THE SEALS IN THE SUCTION PADS HAVE BEEN DAMAGED;**

THE FILTER IS DIRTY:

THE THREE-WAY VALVE DOES NOT SEAL PROPERLY:

REMEDY: CHANGE THE VACUUM HOSES OR CLIPS:

CHANGE THE SEAL IN THE SUCTION PADS:

CLEAN THE FILTERS:

DEMOUNT THE THREE-WAY VALVE, CLEAN, GREASE, AND THEN REMOUNT IT;

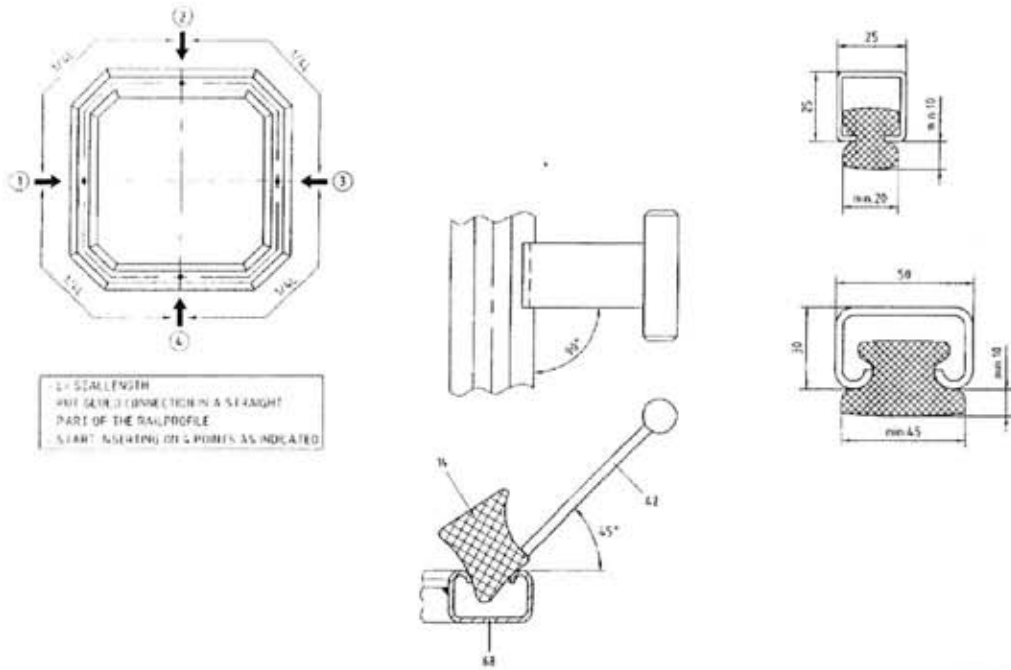
**C. THE VACUUM PUMPS ARE TOO HOT OVER 120 C
CAUSE: FILTHY COOLING RIBS IN VACUUM PUMP:
REMEDY: CLEAN THE COOLING RIBS:**

**B. THE ALARM SYSTEM IS NOT SWITCHED OFF WHEN THE VACUUM
PERCENTAGE IS OVER 60%
CAUSE; THE VACUUM SWITCH HAS BEEN DAMAGED:
REMEDY; CHANGE THE VACUUM SWITCH.**

5.2. ELECTRICAL SYSTEM

**A. THE ELECTRIC MOTORS CANNOT BE STARTED
CAUSE: THE MCB FUSES HAVE TRIPPED OFF:
REMEDY: FIND SHORT CIRCUIT AND CHANGE FUSES:
FIND CAUSE AND RESET THERMAL RELAY.**

**B. THE ALARM SYSTEM IS NOT SWITCHED OFF AND THE GREEN SYSTEM
O.K. LAMP IS NOT ILLUMINATED IF THE VACUUM PERCENTAGE IS OVER
60%
CAUSE: THE VACUUM SWITCH REQUIRES ADJUSTMENT OR HAS BEEN
DAMAGED:
REMEDY: ADJUST AS BELOW OR CHANGE THE VACUUM SWITCH.**



SUCTION PAD SEAL – CHECK SEAL FOR WEAR AND DAMAGE DAILY USE SEAL INSERT TOOL TO RPLCE IF REQUIRED

SUCTION PADS

TYPE : **VK90/45**

QUANTITY : **1**

SERIAL NUMBER : **1673- 1**

DIMENSIONS : **900 X 450 MM**

SEAL TYPE : **40 X 25 MM CODE 088005**

SEAL LENGTH : **2540 MM**

LIFTING CAPACITY : **1000 KG @ 60%**

CERTIFIED



TEST CERTIFICATE LIFT EQUIPMENT

DEVICE TYPE : SKDA1KB	SAFE WORKING LOAD:	1000 KGS
PROOF LOAD:	2000 KGS	
SERIAL NO : 01673	PLANT NO:	N/A
SUCTIONPAD : VK90/45	SAFE WORKING LOAD :	1000 KGS
QUANTITY : 1 OFF	PROOF LOAD :	2000 KGS
DEAD WEIGHT :35KG (INCL)	YEAR OF CONSTRUCTION:	08.12

INDICATED MAXIMUM LOAD

GOOD

DIMENSIONS OF SUCTIONPADS ACC. TO SPEC	GOOD
MAXIMUM VACUUM %	75%
MAXIMUM VACUUM% (UNDER SUCTION)	75%
VACUUM PERCENTAGE AT SUCTION ACTIVATE	60%
S.W.L. VACUUM LEVEL	60%
SAFETY FACTOR @ S.W.L. VACUUM LEVEL	2
TIMED VACUUM DROP FROM 75%- 30% WITH 1000 KG LOAD :	BETTER THAN 6 HOURS
TRIAL WITH PROOF LOADPAD	N/A

ABOVE POINTS COPIED CORRECTLY FROM
INSPECTION SHEET:

DATE: 01.10.12
PAUL WATSON

M.D.

MANUAL FOR SKDA1KB SERIAL NO 01673

EC-DECLARATION OF CONFORMITY FOR MACHINERY
(DIRECTIVE 89/392/EEC, ANNEXE II SUB. A)

MANUFACTURER: THE VACUUM LIFTING COMPANY LTD
LOW TODHILL
ROWALLAN
KILMARNOCK
KA3 2LW

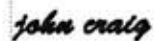
HEREWITH DECLARES THAT
THE VACUUM LIFTING DEVICE TYPE SKDA1KB SERIAL NO: SN:01673
- IS IN CONFORMITY WITH THE PROVISIONS OF THE MACHINERY DIRECTIVE
(DIRECTIVE 98/37 EC), AS AMENDED, AND WITH NATIONAL IMPLEMENTING
LEGISLATION:EN55014-1/A2:2003/EN55014-2/A1:2001/EN61000-3-2:2000
EN61000-3-3/A1:2001/EN60335-2-79/A1:2001
PAUL WATSON



MANAGING DIRECTOR

HEREWITH DECLARES THAT
THE VACUUM LIFTING DEVICE TYPE SKDA1KB SERIAL NO: SN:01673
- IS IN CONFORMITY WITH THE PROVISIONS OF THE LOW VOLTAGE
DIRECTIVE (LVD) 2006/95/EC AND THE EMC DIRECTIVE 2004/108/EC
, AND WITH NATIONAL IMPLEMENTING LEGISLATION:

JOHN CRAIG



TECHNICAL MANAGER





Daily Pre-Use Checklist

Stone Lifter

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Central Tel: +44 (0)1302 341659

Southern Tel: +44 (0)203 174 0658

www.hird.co.uk

Machine Model: SK1000 Stone Vac Lifter		Site Name:
Date Week Commencing:	Fleet No:	Address:
Inspected by:		

Daily Pre-use Checks		M	T	W	T	F	S	S	COMMENTS
1	Are all operators manuals present and readable								
2	Is the Report of Thorough Examination (LOLER) in date								
3	Complete a visual walk around / Inspection for any noticeable defects								
4	Are all safety information decals present and readable								

Check the following components or areas for damage, or missing parts & unauthorised modifications:

5	Is the lifting attachment free from defects and safe to use								
6	Inspect the vacuum pad for rips, tears, quality and cleanliness								
7	Vacuum pipes and connections (in particular quick release fittings - where applicable)								
8	Electrical components, wiring, connectors,								
9	Check input mains voltage corresponds with charger voltage (110v or 240v)								
10	Charger								
11	Check battery has sufficient charge								
12	Check handles security								
13	Check operation buttons / switches are working and free from defects								
14	Energise vacuum on non porous surface								
15	Are lights and audible alarms on during vacuum process								
16	Does the vacuum reach sufficient level, before switching off (see gauges - where applicable)								
17	Check Safe Working load of vacuum - is it suitable for the proposed load								
18	Carry out full function test								

Is the machine safe to use? (please circle)	YES	YES	YES	YES	YES	YES	YES
	NO	NO	NO	NO	NO	NO	NO
Operator's Initials							

Result of Inspections: List defects or state "No Defects"

Signature:	Name:	Date:
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