

**SLV | SYNCHRONOUS LIFTING SYSTEM - VARIABLE SPEED DRIVE**

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**Working pressure 700 bar**

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**Control from 8 to 32 lifting points**

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**Variable speed control**

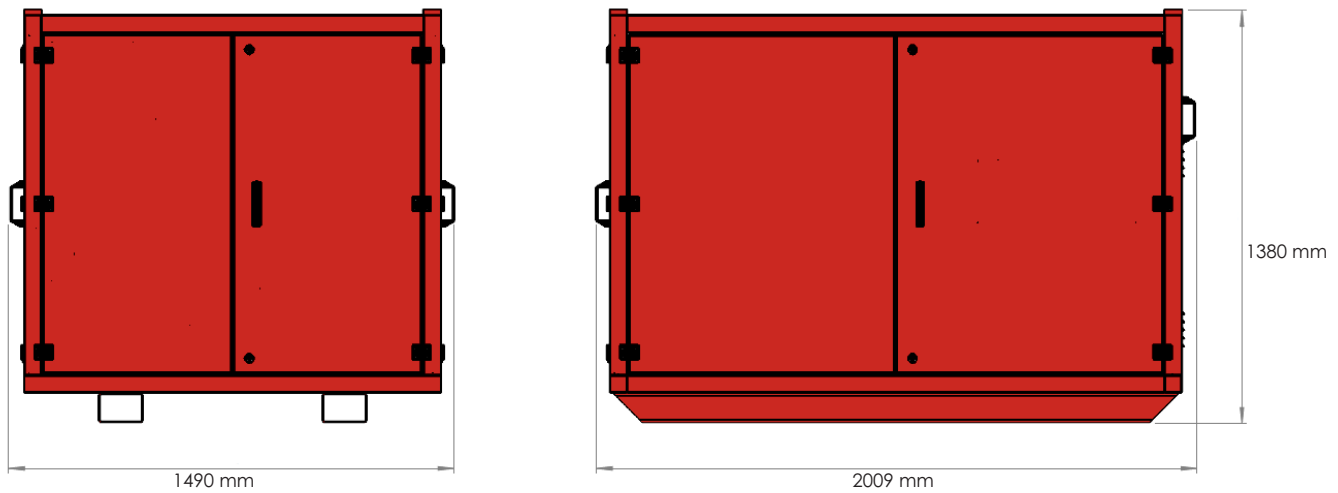
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Control unit complete with multiple screens (depending on configuration and monitoring requirements) and USB port, supplied on a cable for remote operation.



- ▶ Designed for precise lifting and lowering of heavy loads using multiple synchronised hydraulic cylinders
- ▶ System comprises of heavy duty three phase electric motor, operator control panel to monitor up to 32 channels and a robust framework for transportation and storage of the entire system
- ▶ Selection of outlet valves ranging from 8-outlet pump to 32-outlet pump, with single or double acting controls on each outlet
- ▶ Two stage pump unit offers a maximum low pressure flow rate of 19.6 litres per minute and a maximum high pressure flow rate of 4.8 litres per minute at 700 bar with an option of reducing the flow rate using the variable speed drive controller
- ▶ 700 bar pressure transducers are fitted as standard on each outlet
- ▶ Reservoir capacity of 200 and 400 litres
- ▶ Intuitive touch screen controller with several display options including stroke, cylinder pressure, system pressure and indicative weight of load
- ▶ Includes a system data logging feature which allows operators to obtain a post lift report or end of project technical summary
- ▶ Specified for string pot displacement sensors as standard. Alternative sensor types available upon request.
- ▶ Operating modes for the SLV include Manual, Pre-load, Automatic control, Depressurisation, Centre of gravity and Indicative weighing
- ▶ System can be adapted to suit customer's special lifting requirements
- ▶ Customised systems can be tailored for unique application requirements

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Model number	Number of outlets	Oil capacity (litres)	Total oil flow (litres/minute)		Supply voltage
			1 <sup>st</sup> stage	2 <sup>nd</sup> stage	
SLV82	8	200	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV122	12	200	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV162	16	200	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV202	20	200	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV242	24	200	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV282	28	200	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV322	32	200	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV84	8	400	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV124	12	400	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV164	16	400	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV204	20	400	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV244	24	400	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV284	28	400	19.6	4.8	380V/480V (50/60Hz) – 3Ph
SLV324	32	400	19.6	4.8	380V/480V (50/60Hz) – 3Ph

*Note: All models are suitable for operation at 50 Hz and 60 Hz.*

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Mounting kits to fit single and double acting cylinders are listed below.

Model number	Mounting kit type	Applicable cylinder	Increase in cylinder height (mm)
SLMK-1	1	HSS - 25T	+3,5
	1	HSS - 30T	+3,5
SLMK-2	2	HAS - 30T	+10
	2	HRA - 30T	+10
SLMK-3	3	HSS - 50T	+10
	3	HAS - 50T	+10
	3	HRA - 50T	+10
SLMK-4	4	HSS - 75T	+10
SLMK-5	5	HSS - 100T	+10
	5	HAS - 100T	+10
	5	HRA - 100T	+10
SLMK-6	6	HDA - 25T	+11
SLMK-7	7	HDA - 50T	+10
SLMK-8	8	HDA - 100T	+10
SLMK-9	9	HDA - 150T	+10
	9	HDA - 200T	+10
SLMK-10	10	HHS - 20T	+11
SLMK-11	11	HHS - 30T	+12
	11	HHR - 30T	+12
SLMK-12	12	HHS - 37T	+1
SLMK-13	13	HHA - 50T	+1
SLMK-14	14	HHS - 60T	+12
	14	HHR - 60T	+12
SLMK-15	15	HHS - 100T	+10
	15	HHR - 100T	+10
SLMK-16	16	HHR - 150T	+10
SLMK-17	17	HHR - 250T	+10
SLMK-18	18	HFA - 30T	0
SLMK-19	19	HFA - 50T	+8
SLMK-20	20	HFA - 100T	0
	20	HGG - 150T	0
SLMK-21	21	HDA - 300T	0
SLMK-22	22	HDA - 400T	0
	22	HDA - 500T	0
SLMK-23	23	HDA - 800T	0
	23	HDA - 1000T	0
	23	HFG - 800T	0
SLMK-24	24	HFL - 50T	+8
	24	HFG - 50T	+8
SLMK-25	25	HFG - 400T	0
	25	HFG - 500T	0
	25	HGG - 200T	0
	25	HSG - 200T	0
SLMK-26	26	HFL - 100T	+9
	26	HFG - 100T	+9
SLMK-27	27	HFL - 150T	+8
	27	HFG - 150T	+8
	27	HFG - 200T	+8
	27	HSG - 150T	+8
SLMK-28	28	HFG - 250T	0
	28	HFG - 300T	0
	28	HGG - 300T	0
SLMK-29	29	HSG - 300T	0
SLMK-30	30	HFL - 250T	+8
SLMK-31	31	HFL - 400T	+10
SLMK-32	32	HFL - 500T	+10
SLMK-33	33	HFG - 1000T	0

**SLV | SYNCHRONOUS LIFTING SYSTEM - VARIABLE SPEED DRIVE**

The SLV system is designed for use with standard single and double acting cylinders. The table below outlines the SLV models along with the corresponding cylinder types that are compatible with them.

Model number	Applicable cylinder type	Applicable cylinder range	Cylinder stroke (mm)	Page reference
All SLV models	Single acting	HSS	51 - 457	10
	Single acting	HHS	25 - 152	11
	Single acting	HFL	45 - 51	14
	Single acting	HFG	50 - 152	15
	Single acting	HAS	51 - 305	16
	Single acting	HHA	51 - 105	17
	Single acting	HFA	51 - 305	18
	Single acting	HGG	155	20
	Single acting	HSG	152	21
	Double acting	HHR	51 - 305	12
	Double acting	HDA	152 - 508	13
	Double acting	HRA	51 - 305	19

**DISPLACEMENT SENSORS**

- ▶ 635 mm (25 inches) string pot
- ▶ Provides stroke feedback to controls
- ▶ Includes magnet for mounting
- ▶ Each lifting point requires one sensor
- ▶ String pot displacement sensors as standard, other displacement sensors available on request

Model number	Type and stroke (mm)
SLDS650	650



**SENSOR CABLES AND HOSES**

- ▶ Each displacement sensor requires one cable
- ▶ Suitable hydraulic hoses available in lengths up to 100 meters

Cable model number	Hose model number	Length (m)
SLDC10	HC10C	10
SLDC25	HC25C	25
SLDC50	HC50C	50
SLDC75	HC75C	75
SLDC100	HC100C	100

**SYNCHRONOUS LIFTING SYSTEM FEATURES**

FEATURE	SLF	SLV
PRESSURE TRANSDUCERS SUPPLIED AS STANDARD	✓	✓
TOUCH SCREEN DISPLAY TO MONITOR STROKE AND PRESSURE	✓	✓
CONTROL UNIT COMPLETE WITH TOUCH SCREEN	✓	✓
USB PORT FOR SYSTEM DATA LOGGING	-	✓
FORKLIFT ACCESS GUIDE CHANNELS	✓	✓
INDIVIDUAL SELECTION OF CYLINDERS	✓	✓
ACCURACY RANGE ADJUSTABLE UP TO +/- 1 mm BETWEEN LEADING AND LAGGING CYLINDERS	✓	✓
FULL SYSTEM DIAGNOSTICS WITH CABLE UNPLUG DETECTION	✓	✓
CAN PROVIDE INDICATIVE WEIGHT OF LIFT	✓	✓
SYSTEM SUITABLE FOR PRELOADING	✓	✓
VARIABLE SPEED DRIVE FOR PRECISE FINE CONTROL	-	✓
TEMPERATURE MONITORING SYSTEM	-	✓
SYSTEM MOUNTED IN ENCLOSED FRAME WITH DOORS	-	✓
OIL COOLING SYSTEM	-	✓
CENTER OF GRAVITY INDICATION	-	✓
FOR USE WITH BOTH SINGLE AND DOUBLE ACTING CYLINDERS	Defined by model	✓
PUMP UNIT SPEC	Flow from 0.9 to 1.1 l/min per outlet up to 700 bar	Working pressure 700 bar two stage pump unit: 19.6 l/min total flow up to 100 bar, 4.8 l/min total flow up to 700 bar  Option of reducing the flow rate using the variable speed drive controller, which offers an R.P.M. range from 200 to 1800
TANK CAPACITY	Up to 200L reservoir capacity	Up to 400L reservoir capacity
INDIVIDUAL CONTROLLABLE LIFTING POINTS	4 to 8	8 to 32
DISPLACEMENT SENSOR	String pot displacement sensors as standard. Other displacement sensors available on request.	String pot displacement sensors as standard. Other displacement sensors available on request.
SENSOR CABLES	Lengths up to 100 metres	Lengths up to 100 metres