

ELECTRIC- FOURWAY-SIDELOADER

Series EVS 40 / 45



Electric-Fourway-Sideloader by **BAUMANN**

Series
EVS 40 / 45



with guide rollers



Large frame well and fork adjustment

Rail guidance
option available



also outside,...



...highly manoeuvrable in
restricted spaces

platform for
commission

optimum space
utilisation



The Electric- Fourway-Sideloader range

Technical data		
Type	Electrical-Fourway-Sideloader	EVS
Nominal capacity	Q lift load	kg
Load centre	C distance	mm
Effective deck width	N (LK 6,6 + 4PzS)	mm
Drive	E electrical (battery)	
Type of steering	F seated driver steering	
Tyres	load side / battery side	
Wheels (x = driven)	load side / battery side	
Dimensions		
Nominal lift ²⁾	h3 maximum lift	mm
With 2-stage upright	h2 standard free lift	mm
	h5 full free lift	mm
Fork	b width x s thickness	mm
Fork length	l length	mm
Fork tilt	option, to be recommended °	
Height upright lowered	h1 (in free lifting range)	mm
Height upright extended	h4 (at maximum lift)	mm
Upright tilt	upright correction as standard	
Overall length	L (LK)	mm
Loss of load centre	Vn up to fork spine (LK)	mm
Platform width		
	NB	mm
Overall width	B	mm
Platform height	p	mm
Well width	E	mm
Distance between forks	d (overall) mm	
Load clearance	X (max. on sides)	mm
Turning radius	W	mm
Working aisle width	A (stacking aisle)	mm
Aisle width	G (driving / turning)	mm
Cabin height	H (LK)	mm
Performance		
Stability	in compl. with EN 1726-1 yes / no	
Driving	with/without nominal load	km/h
Lifting	with/without nominal load	m/s
Lowering	with/without nominal load	m/s
Upright traverse	with/without nominal load	m/s
Gradability	with/without nominal load	%
Weight		
Service weight	incl. battery	kg
Chassis		
No. of tyres	load side / battery side	
Tyre size	load side	mm
	battery side	mm
Wheel base	y (dist. between axles)	mm
Track	Sp	mm
Service brake (foot brake)	acts on drive wheels	
Parking brake	acts on all wheels	
Drive		
Type of battery	PzS (armoured plated) / voltage	
Battery capacity	during 5 hour discharge	Ah
Battery weight		kg
Drive motors	number / power 100% ED	kW
Transmission	Gear type: manually (lever)	
	gears: forwards / backwards	
Control	Mosfet, stepless	
Lift motor	Power 30% ED	kW
Steering	electrical, hydraulic	
Additions		
Working hydraulics	for additional equipment	bar
Fork carriage	DIN 15173 /FEM	
Wide fork carriage		
Nominal capacity	Q lift load	kg
Load centre	C distance	mm
Effective width ¹⁾ LK 6,6 + 4PzS	NT	mm
Fork length	l length	mm
Loss of load centre	Ve (LK 6.6 / QK 8.5)	mm
Dist. between forks	dT (max. dist. between outsides of forks)	mm
Turning radius	WT	mm
Aisle width	G (drive / turn)	mm

EVS 40 Standard design

EVS 40 With wide fork carriage

40/10 bis 16/33		40/12/33	
4.000			
500 - 800		600	
1.000 - 1.600		1.200	
electrical			
hydrostatic			
Vulkollan			
4/2x			
3.300			
600			
refer to Table			
150 x 50			
1.000 - 1.600		1.200	
- 2 + 5			
2.400			
4.080			
yes			
2.930 / 3.265			
850			
1.000 - 1.600		1.200	
1.850 - 2.450		2.050	
400			
1.600			
1.440			
100			
2.000 - 2.120		2.020	
2.050 - 2.650		2.250	
4.200 - 4.440		4.240	
2.375			
yes			
9/11			
0.2 / 0.25			
0.4 / 0.3			
0.2 / 0.25			
15 / 25			
5.950 - 6.250		5.950	
4 / 2			
4 x 285 / 100			
2 x 406 / 178			
2.430			
1.350 - 1.950		1.550	
100			
hydraul. & automatic reverse current			
parking position electrical			
standard battery 4 PzS /80 (5 PzS/80)			
560 - 600 (700-750)			
refer to Table			
2 x 6			
manual			
stepless			
impulse			
13			
electronic - hydrostatic			
150			
FEM 3 A			
3.700			
475 - 775		575	
965 - 1.565		1.165	
950 - 1.550		1.150	
885 - 1.065			
3.600			
2.040 - 2.160		2.050	
4.280 - 4.520		4.300	

EVS 45 - 1 Standard design

EVS 45 - 1 With wide fork carriage

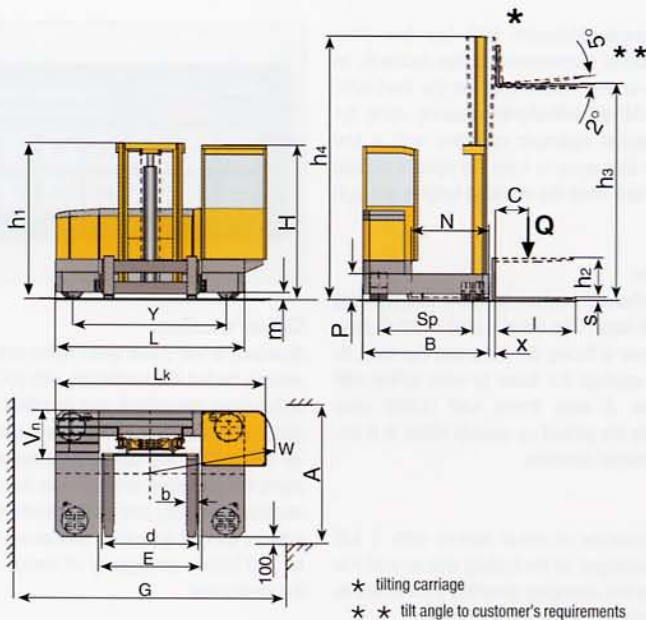
45/10 bis 14/33		45/12/33	
4.500			
500 - 700		600	
1.000 - 1.400		1.200	
electrical			
hydrostatic			
Vulkollan			
4/2x			
3.300			
600			
refer to Table			
150 x 50			
1000 - 1.400		1.200	
- 2 + 5			
2.400			
4.080			
yes			
2.930 / 3.265			
850			
1.000 - 1.400		1.200	
1.850 - 2.250		2.050	
400			
1.600			
1.440			
100			
2.000 - 2.100		2.020	
2.050 - 2.450		2.250	
4.200 - 4.400		4.240	
2.375			
yes			
9/11			
0.2 / 0.25			
0.4 / 0.3			
0.2 / 0.25			
15 / 25			
6.200 - 6.650		6.450	
4 / 2			
4 x 285 / 100			
2 x 406 / 178			
2.430			
1.350 - 1.750		1.450	
100			
hydraul. & automatic reverse current			
parking position electrical			
standard battery 4 PzS /80 (5 PzS/80)			
560 - 600 (700-750)			
refer to Table			
2 x 6			
manual			
stepless			
impulse			
13			
electronic - hydrostatic			
150			
FEM 3 A			
4.200			
475 - 725		575	
965 - 1.365		1.165	
950 - 1.450		1.150	
885 - 1.065			
3.600			
2.040 - 2.130		2.050	
4.280 - 4.460		4.300	

EVS 45 - 2
Standard design

EVS 45 - 2
With wide fork carriage

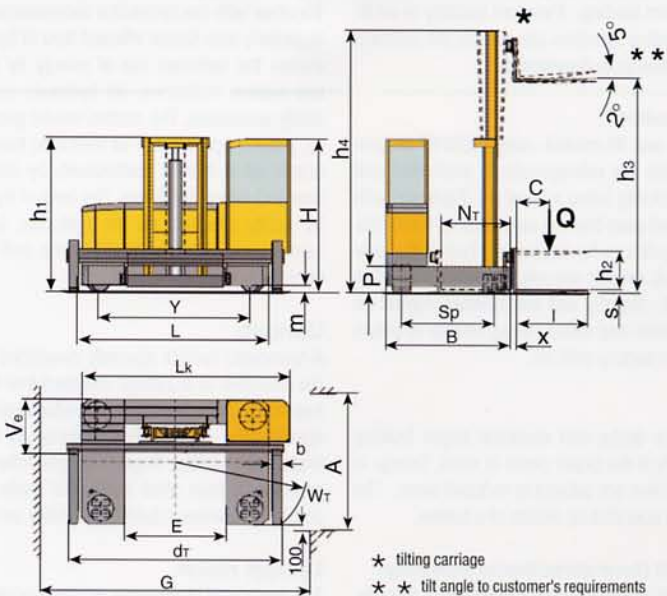
Model EVS standard design

45/14/ bis 18/33	45/16/33
4.500	
700 - 900	800
1.400 - 1.800	1.600
electrical	
hydrostatic	
Vulkollan	
4/2x	
3.300	
600	
refer to Table	
150 x 60	
1.400 - 1.800	1.800
- 2 + 5	
2.475	
4.160	
yes	
2.930 / 3.265	
850	
1.400 - 1.800	1.600
2.250 - 2.650	2.450
400	
1.600	
1.440	
100	
2.100 - 2.175	2.120
2.450 - 2.850	2.650
4.400 - 4.600	4.400
2.375	
yes	
9/11	
0.15 / 0.22	
0.4 / 0.3	
0.2 / 0.25	
15 / 18	
6.700 - 6.900	6.900
4 / 2	
4 x 285 / 100	
2 x 406 / 178	
2.430	
1.750	1.950
100	
hydraul. & automatic reverse current	
parking position electrical	
standard battery 4 PzS / 80 (5 PzS/80)	
560 - 600 (700 - 750)	
refer to Table	
2 x 6	
manual	
stepless	
impulse	
13	
electronic - hydrostatic	
150	
FEM 4 A	
4.200	
650 - 850	750
1.320 - 1.720	1.330
1.300 - 1.700	1.500
(BGT 160) 930 - 1.120	
3.600	
2.100 - 2.240	2.180
4.460 - 4.900	4.800



* tilting carriage
* * tilt angle to customer's requirements

Model EVS with wide fork carriage



* tilting carriage
* * tilt angle to customer's requirements

- 1) Platform widths: special widths dependent on model, upon request
- 2) Lift heights
2-stage upright: up to 6,500 mm
3-stage upright: up to 7,500 mm
- 3) Cylinder extension possible for platform widths between 1,000 and 1,600 mm

Technical description

Electric-Fourway-Sideloaders

EVS 40 - 45

The Electric-Fourway-Sideloader EVS has two drive units, a 4 point wheel suspension and two hydraulic levelling cylinders on the twin wheels on the load side. The classic BAUMANN self-aligning bearing using hydraulically connected hydraulic cylinders with a low centre of gravity also serve to keep the upright vertical especially important when the stacking heights are high in narrow aisles.

Basic design:

A rigid welded chassis enables problem free working even under great loads. The driver's seat which is positioned so the driver is facing the forks and the main direction of travel enables the driver to work safely with minimum fatigue. A wide frame well (1,600 mm) means the pallets are picked up quickly either in a longitudinal or transverse direction.

Drive:

Two high performance electrical motors with 6 kW each = 12 kW, arranged on the battery side as motor in wheel units. Here too, changing direction from forwards to reverse is possible safely whilst in motion.

Chassis:

A four point support, two driving wheels and four load bearing wheels with connected pendulum cylinders enable the Electric-Fourway-Sideloader to be used on uneven ground too. Optimum weight distribution results in reduced floor point loading. Excellent stability at all lift heights. The levelling cylinders also enable the platform to be inclined upwards or downwards.

Electronic control:

Integrated drive and lift control using MOSFET technology. All functions are microprocessor controlled and can be set individually using a hand set. Equipped with regen braking and plug braking as standard. Fault indication and analysis can be displayed. Tuning the control system to suit specific site requirements is possible by the hand set. Battery and temperature control as well as acceleration and speed ramps enable optimum performance and battery shift life.

Brakes:

Hydraulic service brake and electrical regen braking act automatically if the brake pedal is used. Energy is regained, the brakes are subject to reduced wear. The parking brake is operated by means of a button.

Steering EVS (four-directional steering):

Precise all wheel steering without mechanical linkage. Therefore less wear on tyres, direction is changed by pressing a button or using a joystick. Turning in a circle is possible without using the steering wheel. High degree of manoeuvrability thanks to the use of a microprocessor controlled computer which supports the hydraulic steering system – safety steering.

Optional EMS (multi-directional steering):

All wheels are steered individually, designed for 10 steering programs such as: straight ahead, transverse and longitudinal travel, all wheel driver, diagonal travel (crab steering), ladder vehicle travel, stacker travel, circular travel and parking, assisted safety steering by a hydraulic accumulator, can be steered even if the hydraulic system fails.



Driver's cabin:

Spacious driver's seat good vision onto and around the vehicle, tested in compliance with EN 1726 – 1, cabin with rubber mountings and excellent all round vision, guard to protect the cabin from loads on the side and on the roof of the cabin. Automotive pedal arrangement, the operating controls have been positioned ergonomically for easy and safe operation, operating hours counter as well as control indicators, discharge indicator and battery emergency off switch are positioned on the dashboard.

Easy access on the side of the vehicle, if necessary cab access from the rear of the vehicle can be specified. Comfortable seat, fully sprung, adjustable position height and operator weight.

Hydraulic system:

Together with the hydraulics components, short runs of large bore pipe favour efficient flow of hydraulic fluid to ensure the optimum use of energy by providing very low system resistance. All hydraulic components are easily accessible. The control valves guarantee sensitive, precise operation of all hydraulic functions. The hydraulic oil is filtered continuously by easily accessible flow and return line filters. The level of hydraulic oil can be easily checked on the hydraulic tank, test port connections to the hydraulic pump and control valves simplify maintenance work.

Upright:

A telescopic upright specially developed for a Sideloader available as a 2-stage standard free lift, 2-stage full free lift or 3-stage upright; manufactured from slender, special alloy steel profiles designed by BAUMANN for improved visibility. Angled upright rollers with rolling bearings to take axial and radial loads. Wide upright profiles guarantee maximum stability and service life.

Upright reach:

The horizontal transverse of the upright is achieved using hydraulic cylinders in the frame well. As it is guided by extremely long sliders, accurate even movement is possible. Running rails can be renewed easily, if required.

Standard upright:

For lift heights – collapsed heights – free lift heights etc. please refer to table.

Lifting cradle and forks:

Fork carriage made of high-strength steel with four angled rollers. The spacing between the rollers ensure that the load is distributed evenly within the upright and it runs smoothly. Fork carriage in compliance with class FEM 3. Forks made of forged alloy steel.



Standards:

In compliance with EN 1726-1, DIN 15138, FEM 4.001, ANSI B56, DIN 57117, VDE0117,91/368 EEC

Optional equipment:

Full free lift and 3-stage uprights. Hydraulic fork tilt +5° / -2°. Hydraulic adjustment of forks in the frame well. Foldable forks, knife type forks. Wide carriage with hydraulically adjustable forks. Height pre-selection.

Guide rollers:

Mechanical guide rollers, fitted on eccentric bolts on both sides, for quick adjustment.

Special additional equipment upon request.

Battery:

Depending on the capacity required 80 Volt standard batteries, 40 cells with capacities of 560 – 600 Ah – 4 PzS or 700 – 750 Ah – 5 PzS are available. Battery discharge indicator with electronic lift interrupt to prevent the battery from being totally discharged.

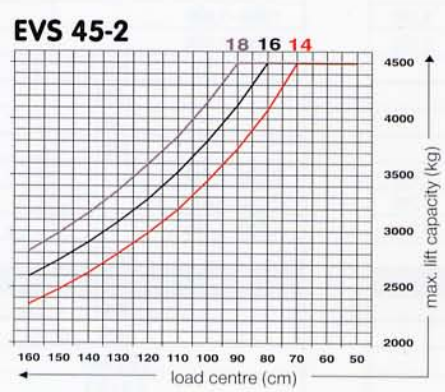
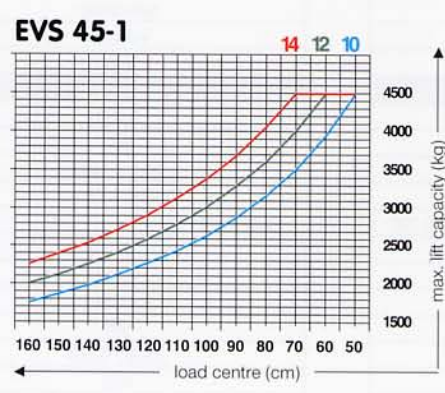
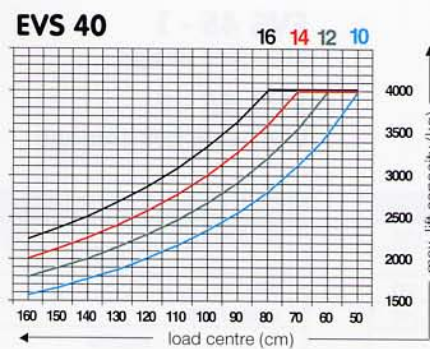
Charger:

All common models available upon request.

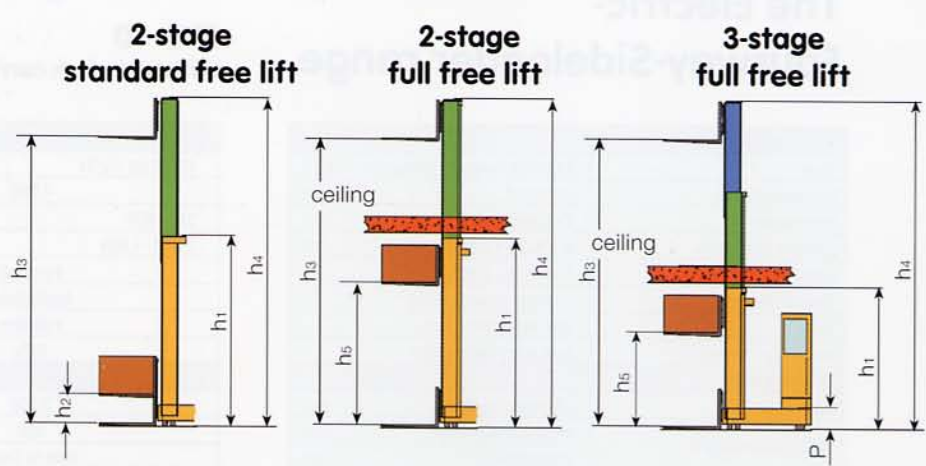
Service:

BAUMANN Electric-Fourway-Sideloaders have been developed to be as easy to maintain as possible. All components are easily accessible. An electronic diagnostics system simplifies trouble shooting and reduces maintenance or repair times. Qualified mobile fitters are also available near you.

We reserve the right to make changes in terms of technical developments. The figures and photographs may also show special accessories which are not included as standard.



Uprights

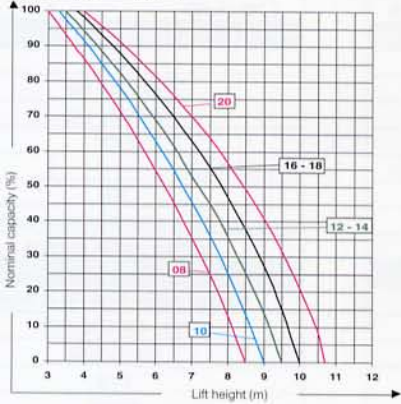


EVS 40 - 45-1

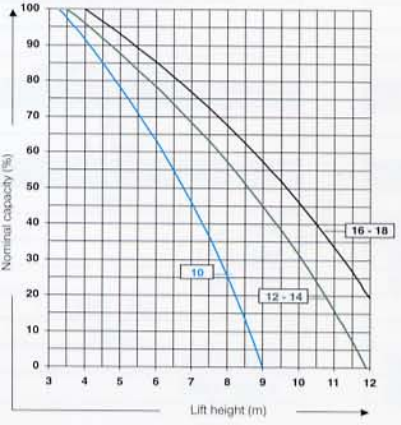
Upright	Lifting height h ₃ mm	Overall height lowered h ₁ mm	Overall height extended h ₄ mm	Standard free lift* h ₂ mm	Full free lift** h ₅ mm
2-stage -ST full free lift SFH	3300	2400	4080	600	1620
	4000	2750	4780	600	1970
	4500	3000	5280	600	2220
	5000	3250	5780	600	2470
	5500	3500	6280	600	2720
	6000	3750	6780	600	2970
3-stage - TR	6500	4100	7280	800	3220
	4500	2250	5280		1470
	5100	2450	5880		1670
	5700	2650	6480		1870
	6300	2950	7080		2170
	6900	3150	7680		2370
	7500	3350	8280		2570
	8100	3550	8880		2770
	9000	3850	9780		3070
	9600	4150	10380		3370
10200	4350	10980		3570	

lift capacity reduction for high lift heights

EVS 40 - 45-1



EVS 45-2



EVS 45-2

Upright	Lifting height h ₃ mm	Overall height lowered h ₁ mm	Overall height extended h ₄ mm	Standard free lift* h ₂ mm	Full free lift** h ₅ mm
2-stage -ST full free lift SFH	3300	2475	4160	600	1615
	4000	2825	4860	600	1965
	4500	3075	5360	600	2215
	5000	3225	5860	600	2465
	5500	3575	6360	600	2715
	6000	3825	6860	600	2965
3-stage - TR	6500	4175	7360	800	3215
	4500	2325	5360		1465
	5100	2525	5960		1665
	5700	2725	6560		1865
	6300	3025	7160		2165
	6900	3225	7760		2365
	7500	3425	8360		2565
	8100	3625	8960		2765
	9000	3925	9860		3065
	9600	4225	10460		3365

applicable* ST ** SFH



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