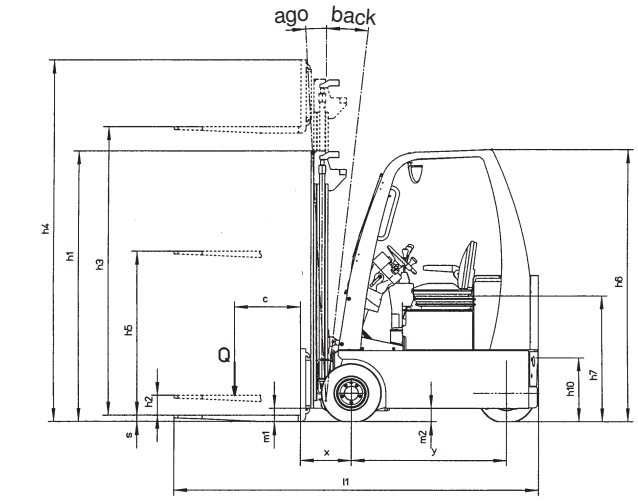
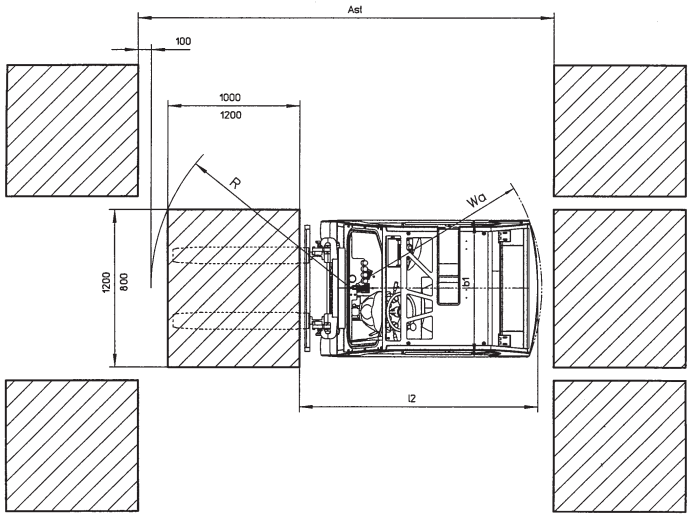
MIAG ex

The specialist in Ex-industrial lift trucks and innovative transport systems

Electric Fork Lift Truck
Explosion-proof, three-phase current techn.

EFG





A_{st} = $W_a + R + a$
A_{st} = Aisle width between stacks
a = Safety distance = 200 mm
l_6 = Pallet width (e.g. 800 oder 1000 mm)
b_{12} = Pallet length (e.g. 1200 mm)

EFG 10-12XE3 / ..ST
Technical Data

MIAG Fahrzeugbau GmbH
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Fon ++49 (0531) 8 66 01-0
Fax ++49 (0531) 8 66 01-50
www.miag.de / info@miag.de

Ex CE

Technical Data
(in accord. with VDI 2198)

Electric Fork Lift Truck (three-wheeled version)
EFG 10-12 XE3/..ST, explosion-proof, three-phase current technology

Explosion protection: the devices are tested and approved by the Physikalisch Technische Bundesanstalt (PTB) (Physical-Technical Federal Institute) for use in areas at risk of explosion according to the following protection classes****: Gas explosion protection - suitable for use in explosive areas, zones 1 and 2 according to BetrSichV within explosion sub-groups IIA and IIB and temperature classes T1 to T4; Dust explosion protection: - suitable for use in explosive areas, zones 21 and 22 according to BetrSichV at surface temperatures of maximum 130°C.

Description							
1.1	Manufacturer (Make [abbreviation])			MIAG	MIAG		
1.2	Type designation of the manufacturer			EFG 10XE3 ..	EFG 12XE3 ..		
1.3	Drive Battery, Diesel, Petrol, fuel gas, mains current			Battery	Battery		
1.4	Operation Hand, Pedestrian, stand-on, driver-seated			driver-seated	driver-seated		
1.5	Carrying capacity / Load	Q	(t)	1,0	1,2		
1.6	Load centre	c	(mm)	500	500		
1.8	Load distance , mast lowered	x	(mm)	385-438****	385-438****		
1.9	Wheel base	y	(mm)	1180	1180		
Weights ****							
2.1	Dead weight	kg		2950*****	3020*****		
2.2	Axle load laden front/rear	kg		3250 / 700	3600 / 620		
2.3	Axle load unladen front/rear	kg		1500 / 1450	1500 / 1520		
Wheels, Chassis							
3.1	Tyres Pneumatic, Solid, Vulcollan			Sup.cush./Pneum.	Sup.cush./Pneum.		
3.2	Dimension in front			18x7-8	18x7-8		
3.3	Dimension at the rear			18x7-8	18x7-8		
3.5	Wheels number front / rear, x=driven			2 / 1x	2 / 1x		
3.6	Truck width front	b_{10}	(mm)	880	880		
3.7	Truck width rear	b_{11}	(mm)	-	-		
Base dimensions ***							
4.1	Mast tilt /fork carriage, ago / back	Degree		2 / 4	2 / 4		
4.2	Height of mast, lowered	h_1	(mm)	2055	2055		
4.3	Free lift	h_2	(mm)	150	150		
4.4	Lift at double mast	h_3	(mm)	2950	2950		
4.5	Height of mast, raised	h_4	(mm)	3515	3515		
4.7	Height above overhead guard (cabin)	h_6	(mm)	2070	2070		
4.8	Seat height (seat load)	h_7	(mm)	1020	1020		
4.12	Height coupling	h_{10}	(mm)	485	485		
4.19	Length total (without forks)	l_1	(mm)	2774****	2774****		
4.20	Length including shank (retired)	l_2	(mm)	1774****	1774****		
4.21	Width total	b_1	(mm)	1040	1040		
4.22	Fork dimensions	$s/e/l$	(mm)	48/128/1000	48/128/1000		
4.23	Fork carriage according to DIN 15173 / ISO 2328, A/B			A	A		
4.24	Fork carriage width	b_3	(mm)	1040	1040		
4.31	Ground clearance with load under lifting frame	m_1	(mm)	100	100		
4.32	Ground clearence centre wheel base (lowest point)	m_2	(mm)	100	100		
4.33	Aisle width for pallets 1000x1200 cross	A_{st}	(mm)	3154	3154		
4.34	Aisle width for pallets 800x1200 along	A_{st}	(mm)	3180	3180		
4.35	Turning radius	W_a	(mm)	1454	1454		
Performance							
5.1	Speed travel laden / unladen	km / h		12 / 12	12 / 12		
5.2	Speed lift laden / unladen	m / s		0,36 / 0,38	0,36 / 0,38		
5.3	Speed lower laden / unladen	m / s		0,50 / 0,36	0,50 / 0,36		
5.5	draw-bar pull laden / unladen(outside expl.-proof area)	N		-	-		
5.6	max. draw-bar pull laden/unladen (outs. expl.-proof area)	N		6000 / 7500	6000 / 7500		
5.7	Climbing capacity with / without load	%		13 / 15	13 / 15		
5.8	Max. gradeability laden / unladen	%		-	-		
5.9	Acceleration period laden / unladen	s		- / -	- / -		
5.10	Service brake			electr. / hydr.	electr. / hydr.		
E-Motor							
6.1	Traction motor, output / 1 hour rating	kW		8	8		
6.2	Lift motor, output / 1 hour rating	kW		5	5		
6.3	Battery according to DIN 43531 / 35 / 36, A / B / C, no			no	no		
6.4	Battery voltage / Capacity K_5	V / Ah		80/230,250	80/230, 250		
6.5	Battery weight	kg		700	700		
Others							
8.1	Motor control type			pulse	pulse		
8.2	Working pressure for attachments	bar		max. 160	max. 160		
8.3	Oil quantity for attachments	l / min		24	24		
8.4	Sound level at driver´s ear to EN12053	dB (A)		64	64		
8.5	Coupling, Kind / Type DIN			SK3	SK3		

*
** from 3500 mm lift height reduction of carrying capacity to80 %
*** with mast design in series, further designs on request
**** depending on device version
***** statements for design with SV mast (without integrated side shift) with basic equipment

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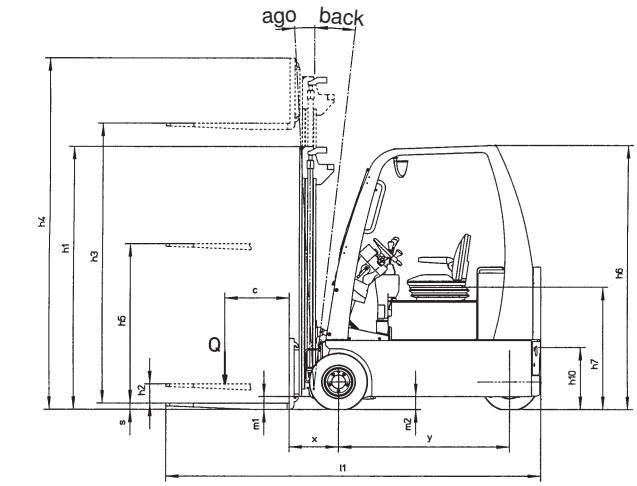

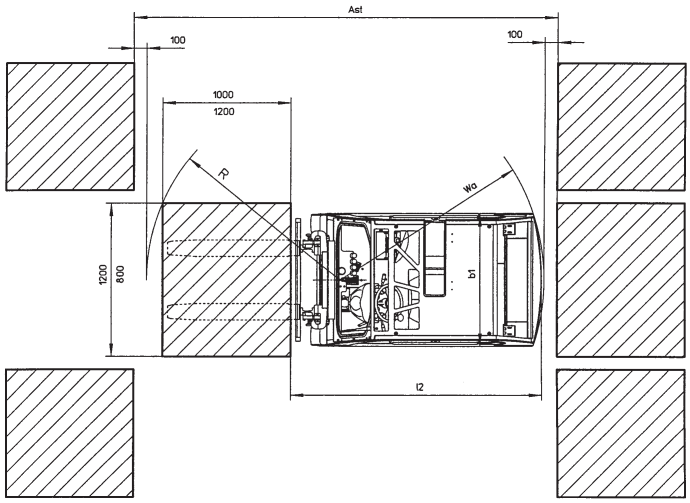

A_{st} = W_a + R + a

A_{st} = Aisle width between stacks

a = Safety distance = 200 mm

l_6 = Pallet width (e.g. 800 oder 1000 mm)

b_{12} = Pallet length (e.g. 1200 mm)

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Description							
1.1	Manufacturer (Make [abbreviation])			MIAG	MIAG	MIAG	
1.2	Type designation of the manufacturer			EFG 10XEV3..	EFG 12XEV3..	EFG 16XEV3..	
1.3	Drive Battery, Diesel, Petrol, fuel gas, mains current			Battery	Battery	Battery	
1.4	Operation Hand, Pedestrian, stand-on, driver-seated			driver-seated	driver-seated	driver-seated	
1.5	Carrying capacity / Load	Q	(t)	1,0	1,2	1,6	
1.6	Load centre	c	(mm)	500	500	500	
1.8	Load distance , mast lowered	x	(mm)	385-438****	385-438****	385-438****	
1.9	Wheel base	y	(mm)	1340	1340	1340	
Weights ****							
2.1	Dead weight	kg		3500*****	3550*****	3600*****	
2.2	Axle load laden front/rear	kg		3480 / 1020	3840 / 910	4520 / 680	
2.3	Axle load unladen front/rear	kg		1820 / 1680	1840 / 1710	1850 / 1750	
Wheels, Chassis							
3.1	Tyres Pneumatic, Solid, Vulcollan			Sup.cush./Pneum.	Sup.cush./Pneum.	Sup.cush./Pneum.	
3.2	Dimension in front			18x7-8	18x7-8	18x7-8	
3.3	Dimension at the rear			18x7-8	18x7-8	18x7-8	
3.5	Wheels number front / rear, x=driven			2 / 1x	2 / 1x	2 / 1x	
3.6	Truck width front	b_{10}	(mm)	880	880	880	
3.7	Truck width rear	b_{11}	(mm)	-	-	-	
Base dimensions ***							
4.1	Mast tilt /fork carriage, ago / back	Degree		2 / 4	2 / 4	2 / 4	
4.2	Height of mast, lowered	h_1	(mm)	2055	2055	2055	
4.3	Free lift	h_2	(mm)	150	150	150	
4.4	Lift at double mast	h_3	(mm)	2950	2950	2950	
4.5	Height of mast, raised	h_4	(mm)	3515	3515	3515	
4.7	Height above overhead guard (cabin)	h_6	(mm)	2070	2070	2070	
4.8	Seat height (seat load)	h_7	(mm)	960	960	960	
4.12	Height coupling	h_{10}	(mm)	485	485	485	
4.19	Length total (without forks)	l_1	(mm)	2932****	2932****	2932****	
4.20	Length including shank (retired)	l_2	(mm)	1932****	1932****	1932****	
4.21	Width total	b_1	(mm)	1040	1040	1040	
4.22	Fork dimensions	$s/e/l$	(mm)	48/128/1000	48/128/1000	48/128/1000	
4.23	Fork carriage according to DIN 15173 / ISO 2328, A/ B			A	A	A	
4.24	Fork carriage width	b_3	(mm)	1040	1040	1040	
4.31	Ground clearance with load under lifting frame	m_1	(mm)	100	100	100	
4.32	Ground clearence centre wheel base (lowest point)	m_2	(mm)	100	100	100	
4.33	Aisle width for pallets 1000x1200 cross	A_{st}	(mm)	3314	3314	3314	
4.34	Aisle width for pallets 800x1200 along	A_{st}	(mm)	3340	3340	3340	
4.35	Turning radius	W_a	(mm)	1605	1605	1605	
Performance							
5.1	Speed travel laden / unladen	km / h		12 / 12	12 / 12	12 / 12	
5.2	Speed lift laden / unladen	m / s		0,36 / 0,38	0,36 / 0,38	0,36 / 0,38	
5.3	Speed lower laden / unladen	m / s		0,50 / 0,36	0,50 / 0,36	0,50 / 0,36	
5.5	draw-bar pull laden / unladen(outside expl.-proof area)	N		-	-	-	
5.6	max. draw-bar pull laden/unladen (outs. expl.-proof area)	N		6000 / 7500	6000 / 7500	6000 / 7500	
5.7	Climbing capacity with / without load	%		13 / 15	13 / 15	11 / 15	
5.8	Max. gradeability laden / unladen	%		-	-	-	
5.9	Acceleration period laden / unladen	s		- / -	- / -	- /-	
5.10	Service brake			electr. / hydr.	electr. / hydr.	electr. / hydr.	
E-Motor							
6.1	Traction motor, output / 1 hour rating	kW		8	8	8	
6.2	Lift motor, output / 1 hour rating	kW		5	5	5	
6.3	Battery according to DIN 43531 / 35 / 36, A / B / C, no			no	no	no	
6.4	Battery voltage / Capacity K_5	V / Ah		80/345,375	80/345,375	80/345,375	
6.5	Battery weight	kg		930	930	930	
Others							
8.1	Motor control type			pulse	pulse	pulse	
8.2	Working pressure for attachments	bar		max. 160	max. 160	max. 180	
8.3	Oil quantity for attachments	l / min		24	24	24	
8.4	Sound level at driver´s ear to EN12053	dB (A)		64	64	64	
8.5	Coupling, Kind / Type DIN			SK3	SK3	SK3	

Subject to changes without notice / 01.11.13

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** from 3500 mm lift height reduction of carrying capacity to80 %
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