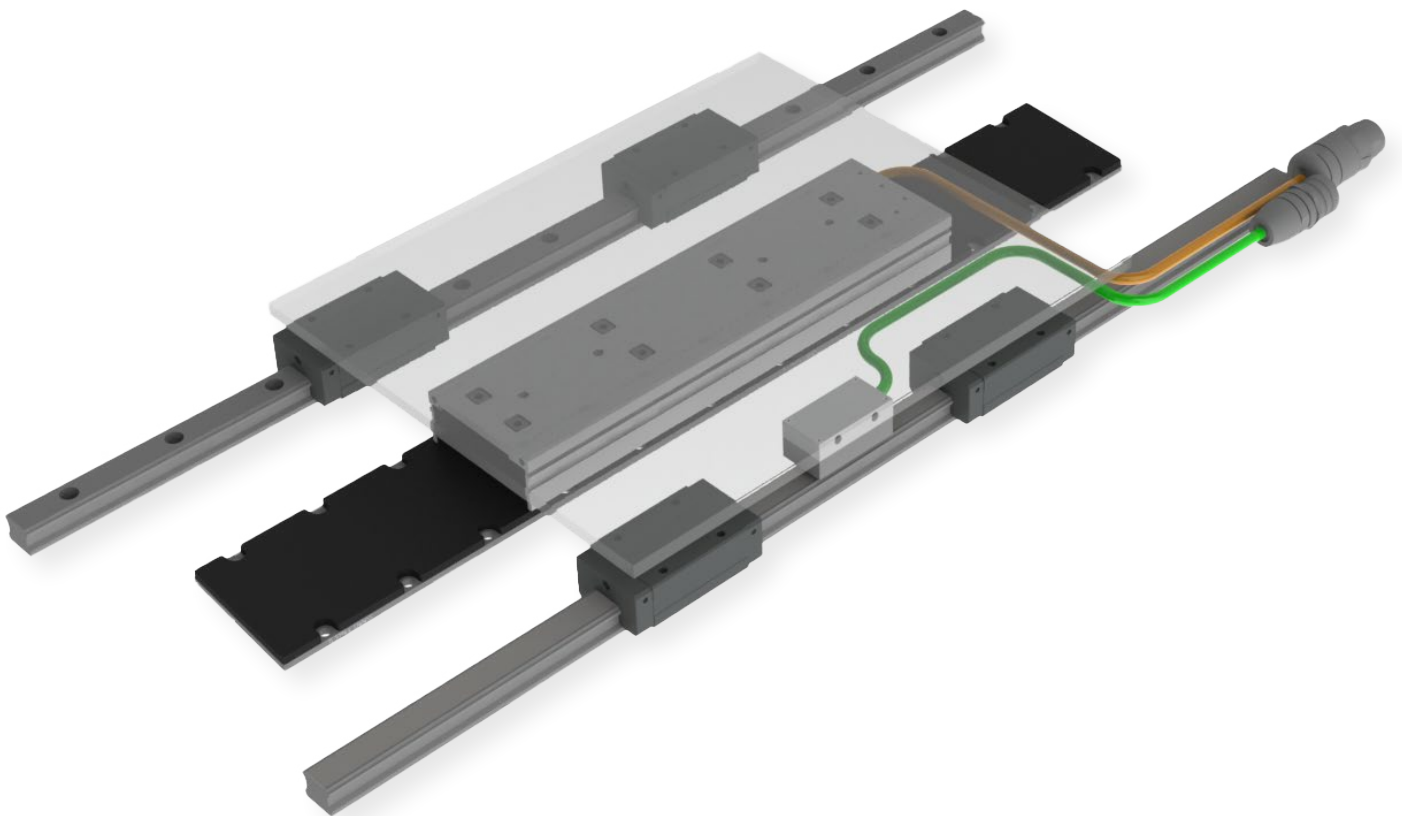


LINEAR MOTOR KIT

DIRECT DRIVE SOLUTIONS



SINADRIVES[®]
DIRECT DRIVE EXPERTS

Linear motor kit advantages

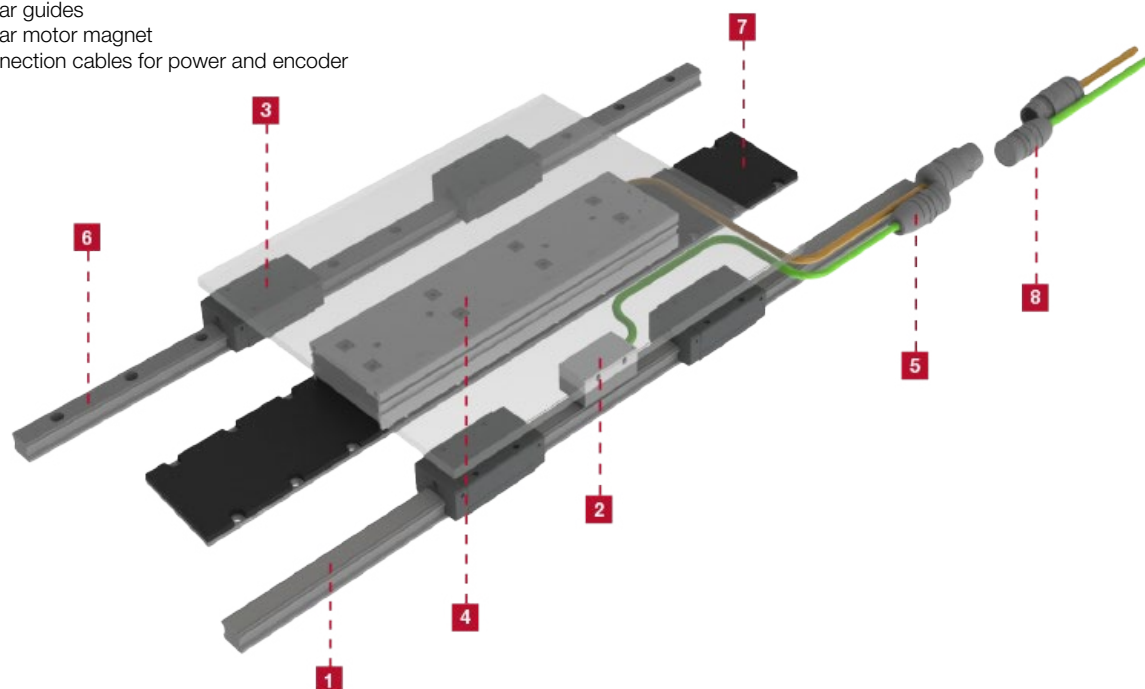
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Advantages of a linear motor kit	3

Linear motor kit

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Components of linear motor kit

1. Integrated measurement system (scale) into the linear guide.
2. Encoder head inductive/magnetic
3. Linear block with ball chain
4. Linear motor iron core/ironless
5. Connectors for power and encoder
6. Linear guides
7. Linear motor magnet
8. Connection cables for power and encoder



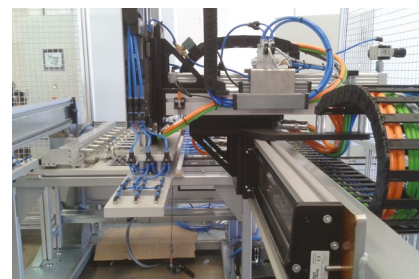
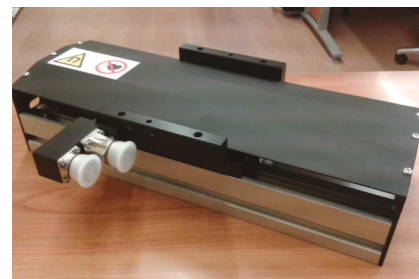
Which better meets my needs: A linear motor kit or linear axis with linear motor?

Advantages of a ready-made linear axis

- **Short delivery time:** complete motion solution available in 4 weeks.
- **Transparent costs:** avoid surprises and additional costs during design and testing.
- **Fast and safe commissioning:** Plug&Play solution with technical support and data set for your servo controller.
- **Short development and construction time:** 3D available for downloading.
- **Functional and operational reliability:** proven solution and 15 years of experience.
- **Flexible and scalable solution:** more than 12 available sizes within the product range.

Advantages of a linear motor kit

- **Flexible and scalable solution:** any size, any stroke and any configuration possible.
- **Reduce development time:** kit with compatible and mutually verified products.
- **Short delivery time:** delivery of kit immediately available.
- **Technical support at all times:** an experienced partner at your side.
- **Flexibility:** can be integrated into the machine structure directly.
- **Reduced assembly costs:** wiring and customised connectors



KMC71S Series - Iron core linear motor

Dimensions and specifications

Magnet plate dimensions		
Code	KMM710064	KMM710128
Le (mm)	64	128
M5 bolts	4	8
Mass (kg/m)	1,6	
Magnet plates can be butted together.		



FLEX Cable

The KMC-Serie comes standard with a 3m long FLEX power cable.

Parameter		Remarks	Sym	Unit	KMC71S	
Performance	Winding type				II01H	II02H
	Motor type, max voltage ph-ph				3-phase synchronous Iron core, 400 V _{ac rms} (565V _{dc})	
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F _u	N	110	220
	Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N	95	190
	Continuous force*	Coils @ 110°C	F _c	N	45	90
	Maximum speed**	@ 320 V	V _{max}	m/s	6	6
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	30	30
Electrical	Motor constant	Coils @ 25°C	S	N ² /W	40	80
	Ultimate current	Magnet @ 25°C	I _u	A _{rms}	5,0	9,9
	Peak current	Magnet @ 25°C	i _p	A _{rms}	3,7	7,3
	Maximum continuous current*	Coils @ 110°C	I _c	A _{rms}	1,5	3,0
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	24	24
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	5	2,5
	Induction per phase	l < 0.6 lp	L _{ph}	mH	30	15
Thermal	Electrical time constant	Coils @ 25°C	T _e	ms	6	
	Max. continuous power loss	All coils	P _c	W	66	132
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	1,85	0,94
	Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122	
Mechanical	Coil unit weight	ex. cables	W	kg	0,4	0,7
	Coil unit length	ex. cables	L	mm	96	160
	Motor attraction force	rms @ 0 A	F _a	N	220	500
	Magnet pitch NN		t	mm	32	
	Cable Type (power FLEX)	Length 3 m	d	mm (AWG)	6.6 (21)	
	Cable Type (sensor)	Length 3 m	d	mm (AWG)	4.9(26)	
	Cable Life Time (power FLEX)***	Minimum			5,000,000 cycles	
	Bending Radius Static	Minimum			4x cable diameter	
Bending Radius Dynamic	Minimum			17,5x cable diameter		

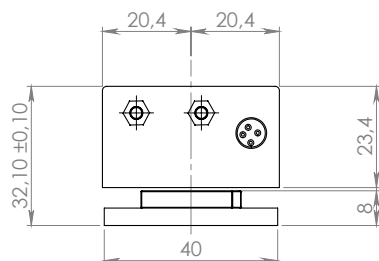
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

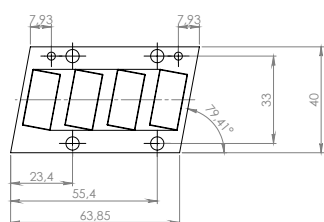
*** Depending on bending radius, velocity and acceleration.

KMC71S Series - Iron core linear motor

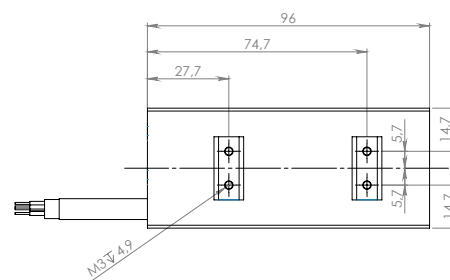
MAGNET PLATES



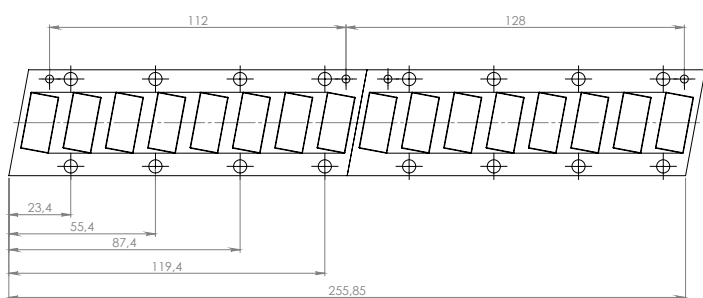
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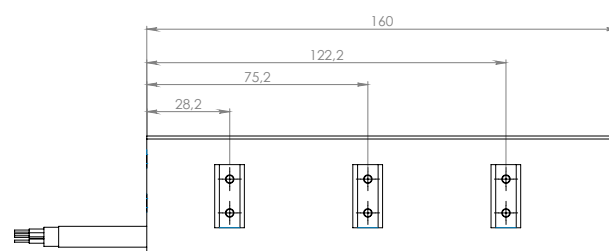
KMC71S-II01H



KMM710128



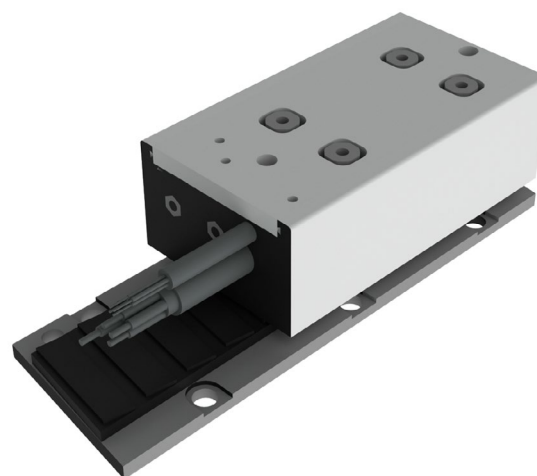
KMC71S-II02H



Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website. * All sizes are in mm

KMC73S Series - Iron core linear motor

Dimensions and specifications



Magnet plate dimensions

Code	KMM730096	KMM730144	KMM730384
Le (mm)	96	144	384
M5 bolts	4	6	16
Mass (kg/m)	2,1		

Magnet plates can be butted together.

FLEX Cable

The KMC-Serie comes standard with a 3m long FLEX power cable.

	Parameter	Remarks	Sym	Unit	KMC73S											
					II01H	II01I	II02H	II02I	II05H	II05I	II07N	II07H	II07I			
Performance	Winding type				II01H	II01I	II02H	II02I	II05H	II05I	II07N	II07H	II07I			
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 400 V _{ac rms} (565V _{dc})											
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F _u	N	120			240			480			720		
	Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N	105			210			420			630		
	Continuous force*	Coils @ 100°C	F _c	N	60			120			240			360		
	Maximum speed**	@ 600 V	V _{max}	m/s	12	36	12	36	12	36	4,5	10,0	36			
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	39	12,9	39	12,9	39	12,9	79	39	12,9			
Motor constant	Coils @ 25°C	S	N ² /W	95			190			380			570			
Electrical	Ultimate current	Magnet @ 25°C	I _u	A _{rms}	4,1	12,6	8,2	25,1	16,4	56,1	12,3	25,1	42,1			
	Peak current	Magnet @ 25°C	i _p	A _{rms}	3,1	9,5	6,2	18,9	12,4	41,5	9,2	18,9	31,1			
	Maximum continuous current*	Coils @ 100°C	I _c	A _{rms}	1,5	4,7	3	9,3	6	20,3	4,5	9,3	15,2			
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	32	11	32	11	32	11	65	32	11			
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	5,4	0,56	2,7	0,28	1,35	0,14	3,6	0,85	0,4			
	Induction per phase	l < 0.6 lp	I _{ph}	mH	35	3,75	17	1,83	9	0,9	23	5,5	2,6			
Thermal	Electrical time constant	Coils @ 25°C	T _e	ms	6,5											
	Max. continuous power loss	All coils	P _c	W	49			99			197			296		
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	1,5			0,75			0,38			0,25		
	Thermal time constant*	up to 63% max. coiltemp.	T _{th}	s	75											
Mechanical	Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122											
	Coil unit weight	ex. cables	W	kg	0,6			0,9			1,6			2,3		
	Coil unit length	ex. cables	L	mm	93			143			93			241		
	Motor attraction force	rms @ 0 A	F _a	N	300			500			900			1300		
	Magnet pitch NN		t	mm	24											
	Cable mass		m	kg/m	0,18											
	Cable Type (power FLEX)	Length 3 m	d	mm (AWG)	8,3 (>18)											
	Cable Type (sensor)	Length 3 m	d	mm (AWG)	4,3 (26)											
	Cable Life Time (power FLEX)***	Minimum			5,000,000 cycles											
	Bending Radius Static	Minimum			4x cable diameter											
Bending Radius Dynamic	Minimum			10x cable diameter												

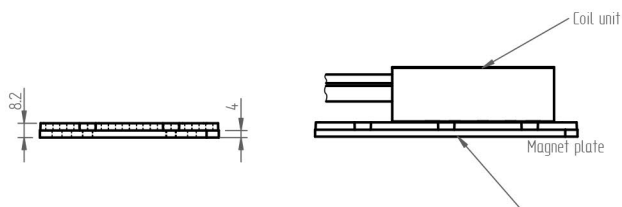
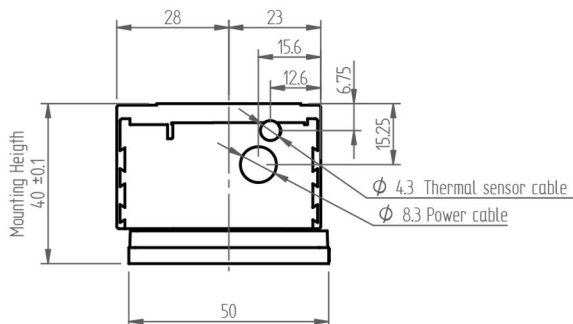
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

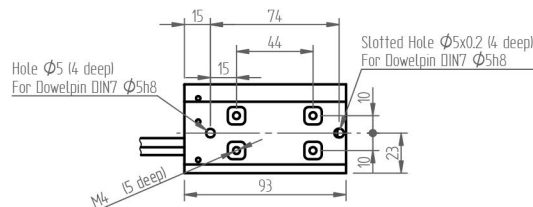
*** Depending on bending radius, velocity and acceleration.

KMC73S Series - Iron core linear motor

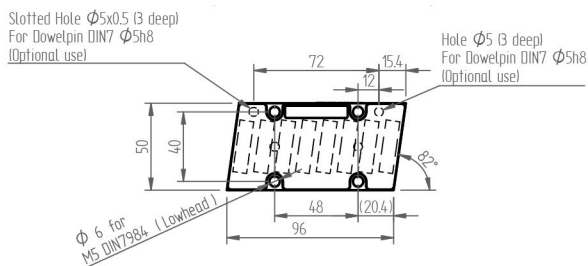
MAGNET PLATES



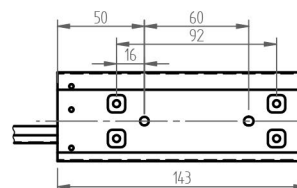
KMC73S-II01H



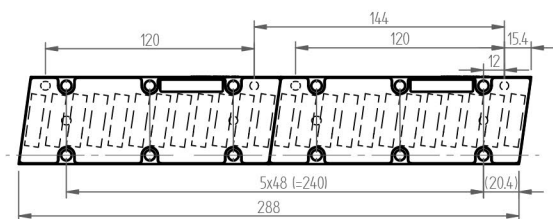
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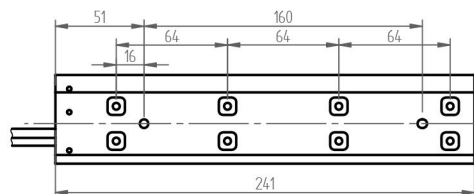
KMC73S-II02H



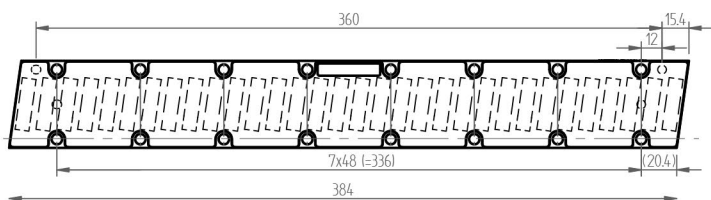
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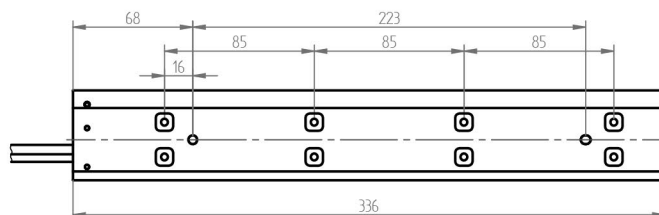
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KMM730384



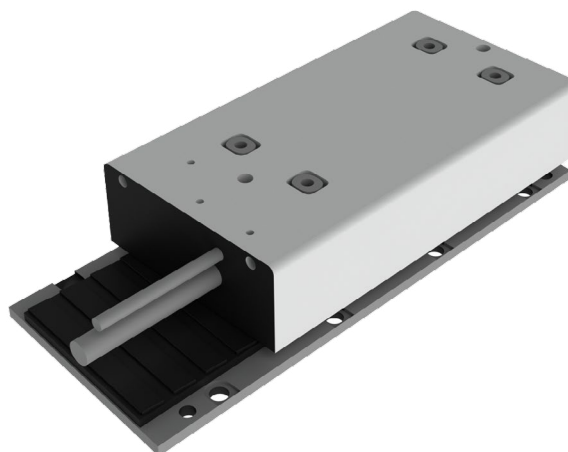
KMC73S-II07H / II07N



Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website. * All sizes are in mm

KMC75S Series - Iron core linear motor

Dimensions and specifications



Magnet plate dimensions		
Code	KMM750192	KMM750288
Le (mm)	192	288
M5 bolts	8	12
Mass (kg/m)	3,8	
Magnet plates can be butted together.		

	Parameter	Remarks	Sym	Unit	KMC75S													
					II04N	II04H	II06N	II06H	II09N	II09H	II11N	II11H	II13N	II13H	II18N	II18H		
Performance	Winding type				II04N	II04H	II06N	II06H	II09N	II09H	II11N	II11H	II13N	II13H	II18N	II18H		
	Motor type, max voltage ph-ph				3-phase synchronous Iron core, 400 V _{ac rms} (565V _{dc})													
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F _u	N	450		675		900		1125		1350		1800			
	Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N	400		600		800		1000		1200		1600			
	Continuous force watercooled**	Coils @ 100°C	F _{cw}	N	210		315		420		525		630		840			
	Continuous force aircooled*	Coils @ 100°C	F _c	N	200		300		400		500		600		800			
	Maximum speed**	@ 560V	V _{max}	m/s	3,5	7	2,5	7	3,5	7	3,5	7	3,5	7	3,5	7		
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	93	46,5	140	46,5	93	46,5	112	46,5	93	44,9	93	46,5		
Motor constant	Coils @ 25°C	S	N ² /W	380		570		760		950		1140		1520				
Electrical	Ultimate current	Magnet @ 25°C	i _u	A _{rms}	6,5	13,1	6,5	19,6	13,1	26,2	13,5	32,7	19,6	41	26,2	52		
	Peak current	Magnet @ 25°C	I _p	A _{rms}	5,0	10,0	5,0	15,0	10,0	20,0	10,4	25,0	15,0	31,0	20,0	40,0		
	Continuous current watercooled*	Coils @ 100°C	I _{cw}	A _{rms}	2,26	4,5	2,26	6,8	4,5	9,0	4,7	11,3	6,8	14,0	9,0	18,1		
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	76	38	114	38	76	38	92	38	76	38	76	38		
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	7,2	1,80	10,8	1,21	3,6	0,90	4,3	0,72	2,41	0,59	1,81	0,46		
	Induction per phase	l < 0.6 lp	L _{ph}	mH	54	14	81	9,0	27	7,0	32	5,4	18	4,4	14	3,4		
Electrical time constant	Coils @ 25°C	t _e	ms	7,5														
Thermal	Max. continuous power loss	All coils	P _c	W	150		225		300		375		450		600			
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	0,48		0,32		0,24		0,19		0,16		0,12			
	Thermal time constant*	up to 63% max. coiltemp.	t _{th}	s	77													
	Watercooling flow	For ΔT=3K	Ow	l/min	0,7		1,1		1,4		1,8		2,2		2,9			
	Watercooling pressure-drop	Order of magnitude	ΔP _w	bar	1		1		2		2		2		3			
Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122														
Mechanical	Coil unit weight	ex. cables	M	kg	1,5		2,0		2,6		3,2		3,8		5,2			
	Coil unit length	ex. cables	L	mm	146		194		244		290		336		468			
	Motor attraction force	rms @ 0 A	F _a	N	950		1325		1700		2075		2450		3400			
	Magnet pitch NN		t	mm	24													
	Cable mass		m	g/m	180													
	Cable type (power)	Length 3 m	d	mm (AWG)	9,6 (18)										11,9 (14)			
Cable Type (sensor)	Length 3 m	d	mm (AWG)	4,3 (26)										4,3 (26)				

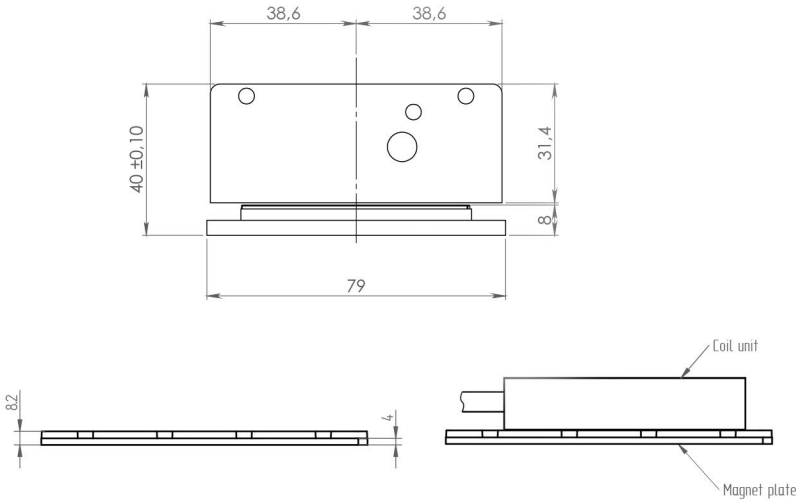
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

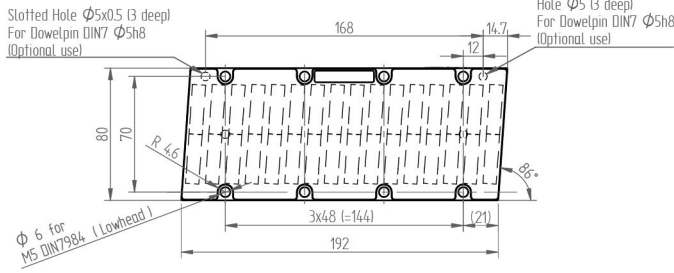
*** Depending on bending radius, velocity and acceleration.

KMC75S Series - Iron core linear motor

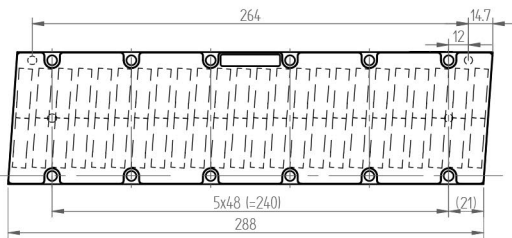
MAGNET PLATES



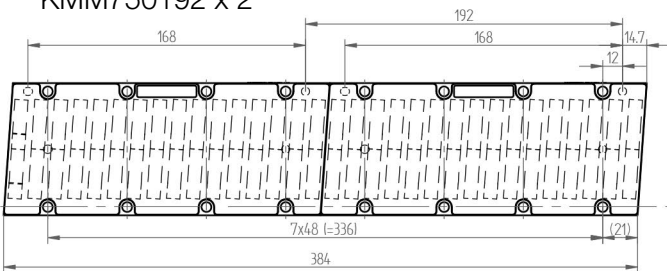
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KMM750288

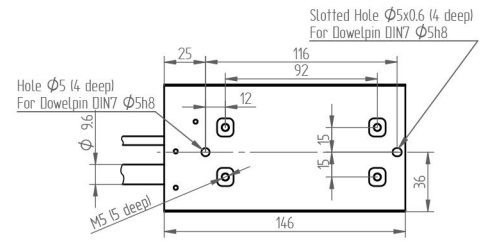


KMM750192 x 2

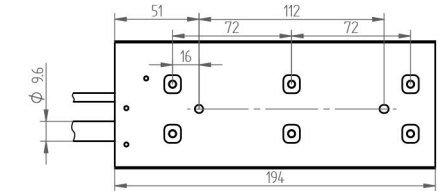


Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
* All sizes are in mm

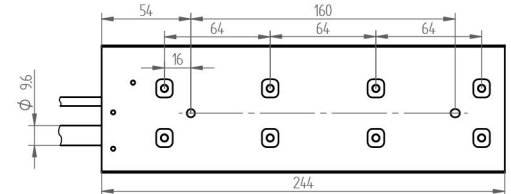
KMC75S-II04N / II04H



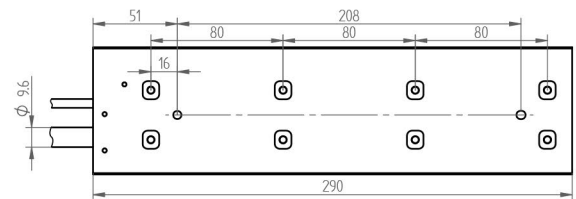
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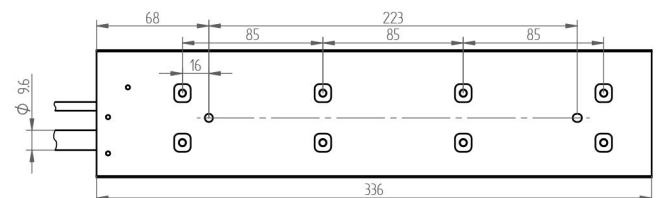
KMC75S-II09N / II09H



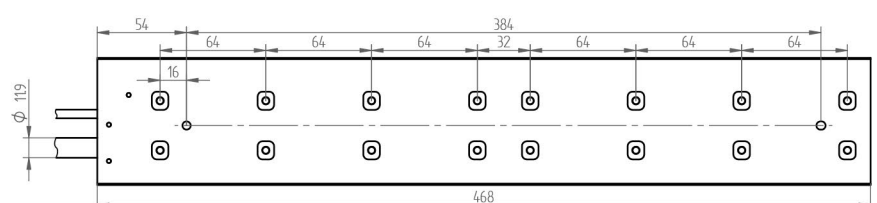
KMC75S-II11N / II11H



KMC75S-II13N / II13H



KMC75S-II18N / II18H



KMC77S Series - Iron core linear motor

Dimensions and specifications



Magnet plate dimensions

Code	KMM770192	KMM770288
Le (mm)	192	288
M5 bolts	8	12
Mass (kg/m)	10,5	
<i>Magnet plates can be butted together.</i>		

	Parameter	Remarks	Sym	Unit	KMC77S							
					II18N	II18H	II22N	II22H	II45N	II45H	II71N	II71H
Performance	Winding type				II18N	II18H	II22N	II22H	II45N	II45H	II71N	II71H
	Motor type, max voltage ph-ph				3-phase synchronous Iron core, 400 V _{ac rms} (V _{dc})							
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F _u	N	1800		2250		4500		7125	
	Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N	1600		2000		4000		6300	
	Continuous force*	Coils @ 100°C	F _c	N	760		950		1900		3000	
	Maximum speed**	@ 560 V	V _{max}	m/s	3	6	2,5	6	2,5	6	3	6
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	186	93	225	93	225	93	224,5	93,0
Motor constant	Coils @ 25°C	S	N ² /W	1750		2150		4300		6600		
Electrical	Ultimate current	Magnet @ 25°C	I _u	A _{rms}	13,0	26	13,5	33	27	66	43	104
	Peak current	Magnet @ 25°C	i _p	A _{rms}	10,0	20	10,0	25	20	50	33	79
	Maximum continuous current*	Coils @ 100°C	I _c	A _{rms}	4,1	8,2	4,2	10,2	8,5	20,5	13	32
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	152	76	183	76	183	76	183	76
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	6,3	1,6	7,6	1,3	3,8	0,65	253	0,43
	Induction per phase	I < 0.6 Ip	L _{ph}	mH	51	13	60	10	30	5	20	3
	Electrical time constant	Coils @ 25°C	T _e	ms	8							
Thermal	Max. continuous power loss	All coils	P _c	W	430		530		1060		1827	
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	0,15		0,12		0,06		0,04	
	Thermal time constant*	up to 63% max. coiltemp.	T _{th}	s	90							
	Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122							
Mechanical	Coil unit weight	ex. cables	W	kg	4,9		5,9		11,6		16,5	
	Coil unit length	ex. cables	L	mm	244		290		562		847	
	Motor attraction force	rms @ 0 A	F _a	N	3400		4150		8300		12450	
	Magnet pitch NN		t	mm	24							
	Cable mass		m	kg/m	0,3							
	Cable Type (power FLEX)***	Length 3 m	d	mm (AWG)	11,9 (14)							
Cable Type (sensor)	Length 3 m	d	mm (AWG)	4.3 (26)								

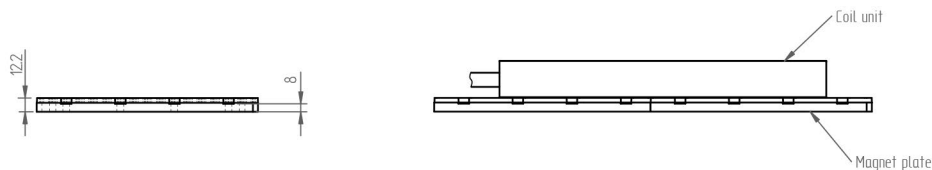
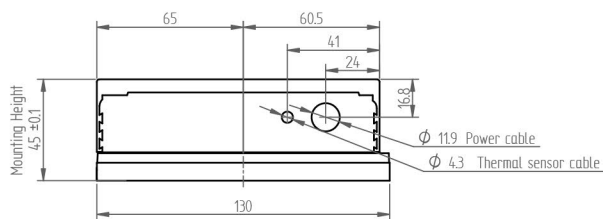
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

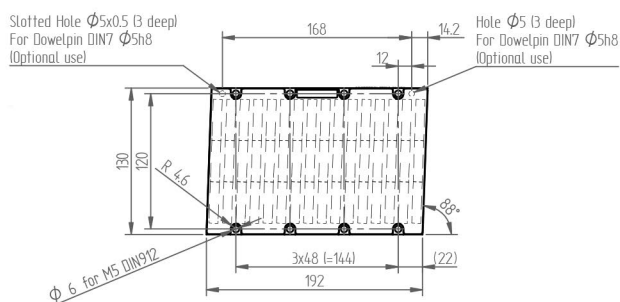
*** Depending on bending radius, velocity and acceleration.

KMC77S Series - Iron core linear motor

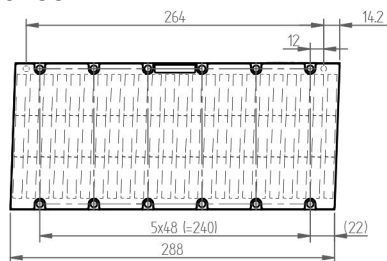
MAGNET PLATES



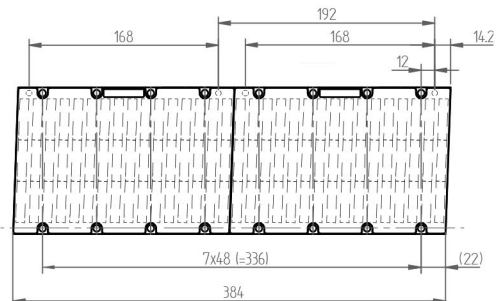
KMM770192



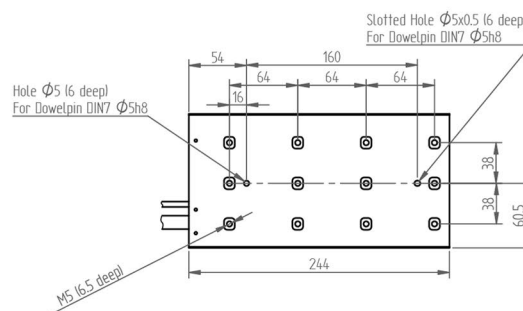
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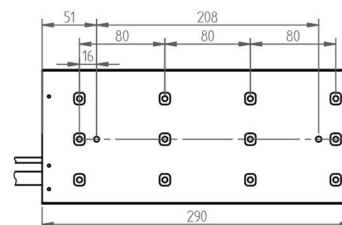
KMM770192 x 2



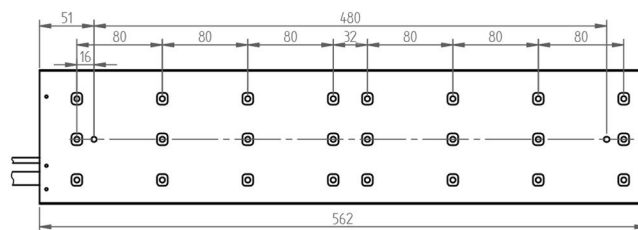
KMC77S-II18N / II18H



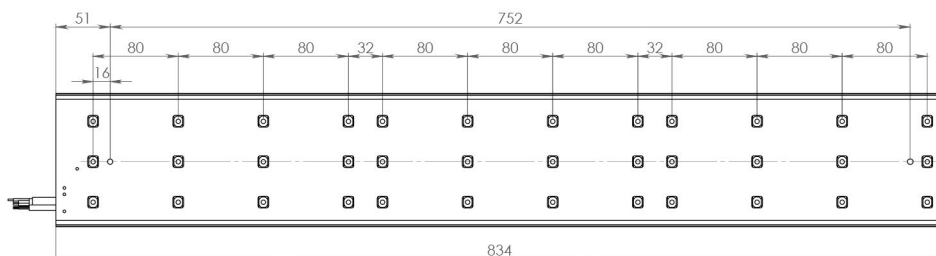
KMC77S-II22N / II22H



KMC77S-II45N / II45H



KMC77S-II71N / II71H



Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
* All sizes are in mm

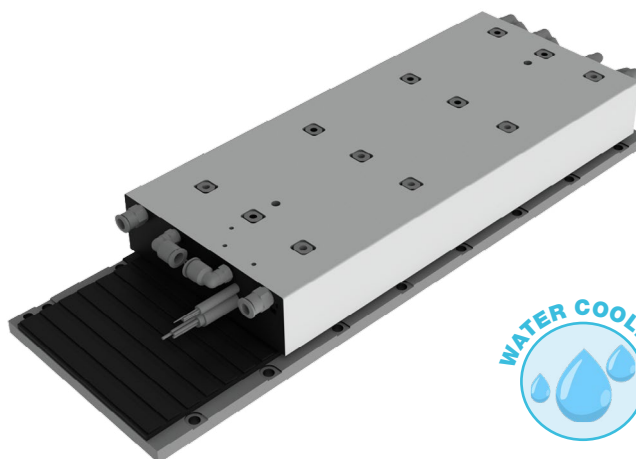
KMC78S Series - Iron core linear motor

Dimensions and specifications

Magnet plate dimensions		
Code	KMM780192	KMM780288
Le (mm)	192	288
M5 bolts	8	12
Mass (kg/m)	10,5	
Magnet plates can be butted together.		

Water cooling

All KMC78S motors feature integrated cooling channels that allow for the easy setup of a liquid cooled system, at no additional cost.



Parameter		Remarks	Sym	Unit	KMC78S					
Performance	Winding type				I123N	I123H	I147N	I147H	I171N	I171H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 400 V _{ac rms} (V _{dc})					
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F _u	N	2850		4750		7125	
	Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N	2520		4200		6300	
	Continuous force watercooled**	Coils @ 100°C	F _{cw}	N	1560		2600		3900	
	Continuous force aircooled*	Coils @ 100°C	F _c	N	1140		1900		2850	
	Maximum speed**	@ 560 V	V _{max}	m/s	3	6	2,5	6	2,5	6
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	186	90	225	93	225	93
	Motor constant	Coils @ 25°C	S	N²/W	2640		4400		6600	
Electrical	Ultimate current	Magnet @ 25°C	I _u	A _{rms}	21	43	29	69	43	104
	Peak current	Magnet @ 25°C	i _p	A _{rms}	16	33	22	53	33	79
	Maximum continuous current*	Coils @ 100°C	I _c	A _{rms}	8	17	12	28	17	42
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	152	76	183	76	183	76
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	4,4	1,0	3,9	0,66	2,6	0,44
	Induction per phase	l < 0.6 lp	I _{ph}	mH	35	8	31	5	21	3
	Electrical time constant	Coils @ 25°C	T _e	ms	8					
Thermal	Max. continuous power loss	All coils	P _c	W	726		1209		1804	
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	0,10		0,06		0,04	
	Thermal time constant*	up to 63% max. coiltemp.	T _{th}	s	87					
	Watercooling flow	für ΔT=3K	Ow	l/min	3,1		5,2		7,8	
	Watercooling pressure-drop	Größenordnung	ΔP _w	bar	1,0		1,5		2,5	
	Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122					
Mechanical	Coil unit weight	ex. cables	W	kg	7,3		12,3		18,2	
	Coil unit length	ex. cables	L	mm	344		580		852	
	Motor attraction force	rms @ 0 A	F _a	N	4900		8300		12450	
	Magnet pitch NN		t	mm	24					
	Cable mass		m	kg/m	0,3		0,6			
	Cable Type (power FLEX)***	Length 3 m	d	mm (AWG)	11,9 (14)		16,9 (10)			
Cable Type (sensor)	Length 3 m	d	mm (AWG)	4,3 (26)						

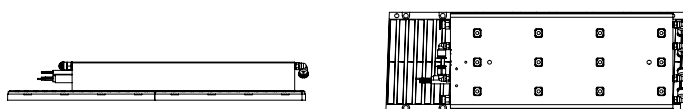
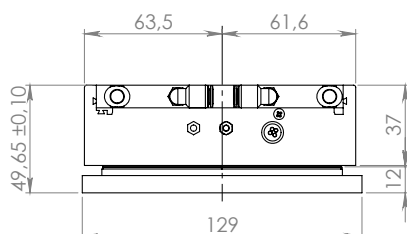
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

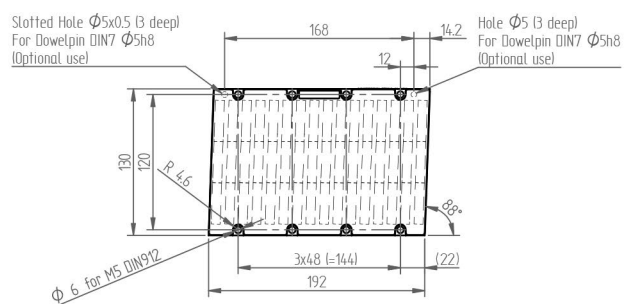
*** Depending on bending radius, velocity and acceleration.

KMC78S Series - Iron core linear motor

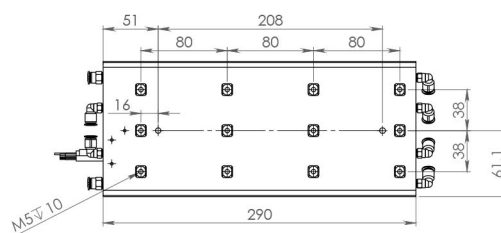
MAGNET PLATES



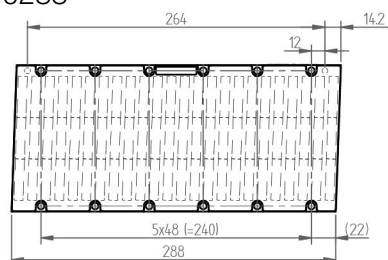
KMM770192



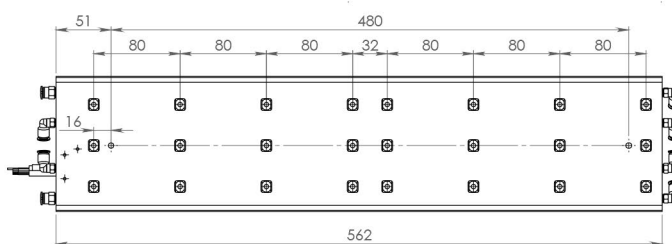
KMC78S-II23N / II23H



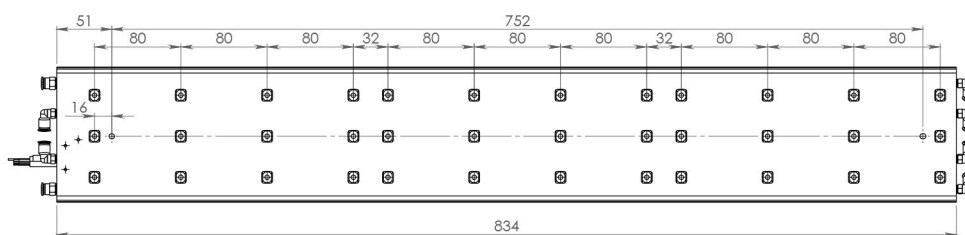
KMM770288



KMC78S-II47N / II47H



KMC78S-II71N / II71H



Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website. * All sizes are in mm

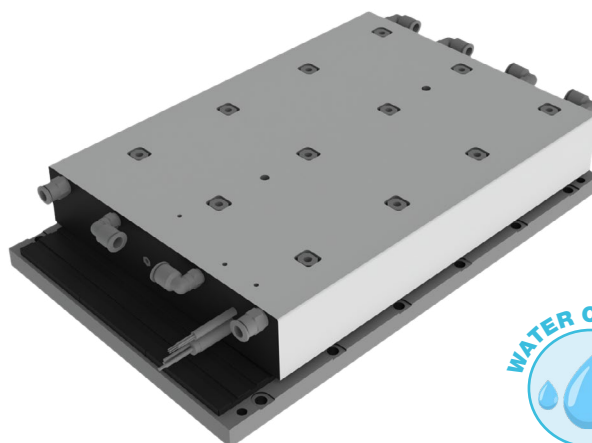
KMC79S Series - Iron core linear motor

Dimensions and specifications

Magnet plate dimensions		
Code	KMM790192	KMM790288
Le (mm)	192	288
M5 bolts	8	12
Mass (kg/m)	12	
Magnet plates can be butted together.		

Water cooling

All KMC79S motors feature integrated cooling channels that allow for the easy setup of a liquid cooled system, at no additional cost.



	Parameter	Remarks	Sym	Unit	KMC79S													
					II27N	II27H	II34N	II34H	II41N	II41H	II54N	II54H	II68N	II68H	II10N	II10H		
Performance	Winding type				3-phase synchronous Iron core, 380 V _{ac rms} (600V _{dc})													
	Motor type, max voltage ph-ph				3-phase synchronous Iron core, 380 V _{ac rms} (600V _{dc})													
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F _u	N	2700		3375		4050		5400		6750		10125			
	Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N	2400		3000		3600		4800		6000		9000			
	Continuous force watercooled**	Coils @ 110°C	F _{cw}	N	1500		1950		2340		3000		3900		5850			
	Continuous force aircooled*	Coils @ 110°C	F _c	N	1200		1500		1800		2400		3000		4500			
Electrical	Maximum speed**	@ 600V	V _{max}	m/s	2	4	1,5	4	2	4	2	4	1,5	4	1,5	4		
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	279	139,5	336	139,5	279	135	279	139,5	336	139,5	336	139,5		
	Motor constant	Coils @ 25°C	S	N ² /W	2864		3580		4296		5728		7160		10740			
	Ultimate current	Magnet @ 25°C	i _u	A _{rms}	13,1	26	13,5	33	20	41	27	52	28	66	41	98		
	Peak current	Magnet @ 25°C	I _p	A _{rms}	10	20	11	25	15	31	20	40	21	50	31	75		
	Continuous current water cooled	Coils @ 110°C	I _{cw}	A _{rms}	5,5	11	6	14	8	17	11	22	12	29	18	42		
	Continuous current air cooled	Coils @ 110°C	I _c	A _{rms}	4,3	9	4,3	11	6,5	13,4	9	18	9	22	13,4	32		
	Back EMF Phase-Phase _{peak}	Phase-Phase peak	B _{emf}	V/m/s	228	114	274	114	228	110	228	114	274	114	274	114		
	Resistance per phase	Coils @ 25°C	R _{ph}	Ω	9,1	2,27	10,8	1,82	6,06	1,45	4,54	1,14	5,4	0,91	3,61	0,61		
	Induction per phase	I < 0.63 Ip	L _{ph}	mH	77,35	19	92	15	52	12	39	10	46	8	31	5		
Thermal	Electrical time constant	Coils @ 25°C	t _e	ms	8,5													
	Max. continuous power loss	All coils	P _c	W	713		891		1011		1347		1684		2527			
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	0,13		0,12		0,11		0,09		0,07		0,03			
	Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122													
Mechanical	Coil unit weight	ex. cables	M	kg	7		9		12		16		18		27			
	Coil unit length	ex. cables	L	mm	248		296		336		440		568		840			
	Motor attraction force	rms @ 0 A	F _a	N	5100		6225		7350		6800		12450		18675			
	Magnet pitch NN		t	mm	24													
	Cable type (power)	Length 3 m	d	mm(AWG)	10,1 (14)										12,1 (11)		14,7(9)	
	Cable Type (sensor)	Length 3 m	d	mm (AWG)	4,9 (26)													
	Cable life	Minimum	d	Cycles	5,000,000 cycles										3-5millions cycles			
	Bending radius static	Minimum		mm	4x cable diameter										5x cable diameter			
Bending radius dynamic	Minimum		mm	7,5x cable diameter										10x cable diameter				

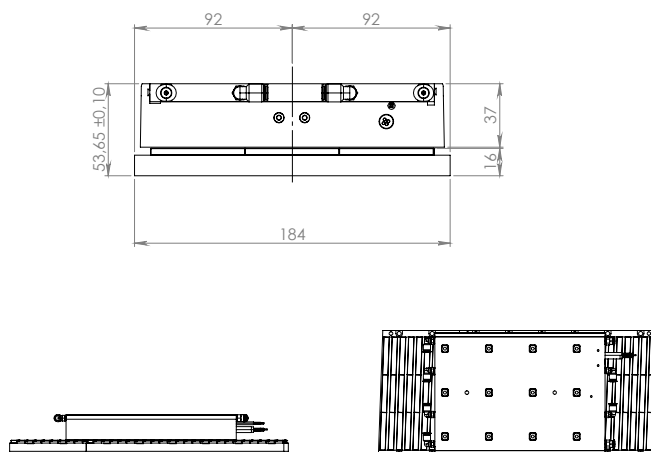
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

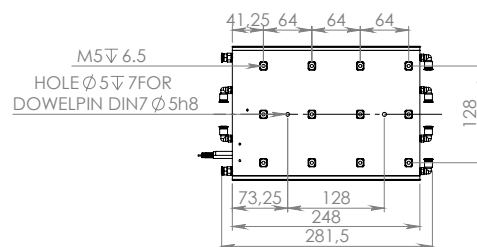
*** Depending on bending radius, velocity and acceleration.

KMC79S Series - Iron core linear motor

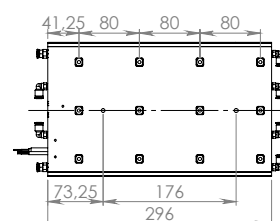
MAGNET PLATES



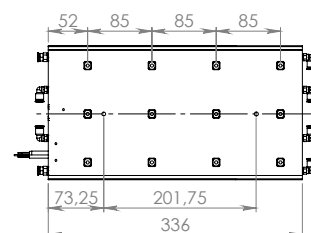
KMC79S-II27N / II27H



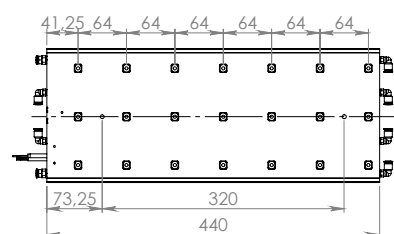
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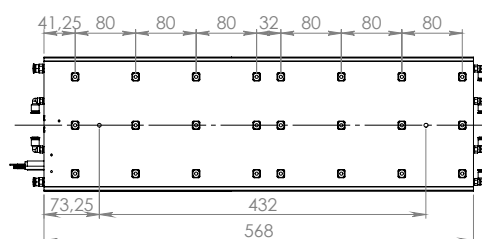
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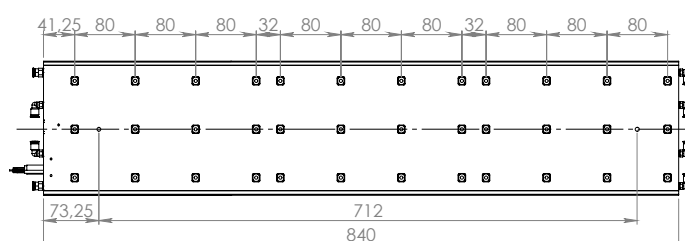
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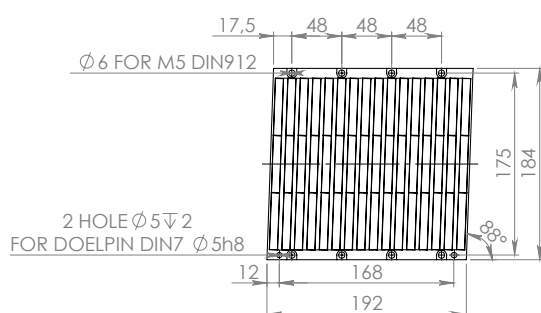
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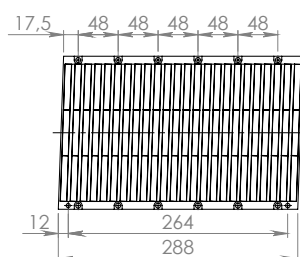
KMC79S-II10N / II10H



KMM790192



KMM790288



Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
* All sizes are in mm

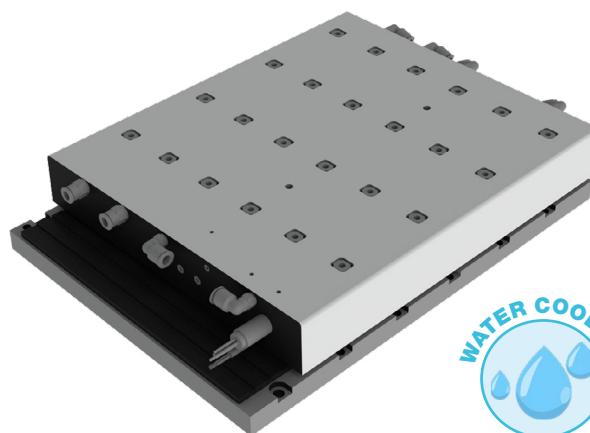
KMC80S Series - Iron core linear motor

Dimensions and specifications

Magnet plate dimensions			
Code	KMM800192	KMM800288	KMM800384
Le (mm)	192	288	384
M5 bolts	8	12	16
Mass (kg/m)	34		
Magnet plates can be butted together.			

Water cooling

All KMC80S motors feature integrated cooling channels that allow for the easy setup of a liquid cooled system, at no additional cost.



		Parameter	Remarks	Sym	Unit	KMC80S					
Performance	Winding type					II34H	II42H	II50H	II67N	II84H	II12H
	Motortype, max voltage ph-ph					3-phase synchronous Iron core, 380 V _{ac rms} (600V _{dc})					
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F _u	N	3360	4200	5040	6720	8400	12600	
	Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N	3200	4000	4800	6400	8000	12000	
	Continuous force watercooled**	Coils @ 110°C	F _{cw}	N	2080	2600	3120	4160	5200	7800	
	Continuous force aircooled*	Coils @ 110°C	F _c	N	1600	2000	2400	3200	4000	6000	
	Maximum speed**	@ 600 V	V _{max}	m/s	3.0						
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	174						
Electrical	Motor constant	Coils @ 25°C	S	N ² /W	1802	2243	2883	3604	4485	12615	
	Ultimate current	Magnet @ 25°C	I _u	A _{rms}	26	34	40	52	65	98	
	Peak current	Magnet @ 25°C	i _p	A _{rms}	21	27	32	43	53	80	
	Continuous current water cooled	Coils @ 110°C	I _{cw}	A _{rms}	12	15	18	24	30	45	
	Continuous current air cooled	Coils @ 110°C	I _c	A _{rms}	9,2	12	14	18,5	23	35	
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	142						
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	2,8	2,25	1,75	1,4	1,125	0,8	
	Induction per phase	l < 0.6 lp	I _{ph}	mH	28	22,5	17,5	14	11,3	8	
Thermal	Electrical time constant	Coils @ 25°C	T _e	ms	10						
	Max. continuous power loss	All coils	P _c	W	1847	2319	2597	3693	4638	6957	
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	0,08	0,06	0,05	0,04	0,03	0,01	
	Temperature cut-off / sensor				PTC 1kΩ / NTC						
	Mechanical	Coil unit weight	ex. cables	W	kg	9	12	15	20	25	38
		Coil unit length	ex. cables	L	mm	273	321	336	465	593	865
		Motor attraction force	rms @ 0 A	F _a	N	7200	9000	10800	14400	18000	27000
		Magnet pitch NN		t	mm	24					
Cable Type (power)		Length 3 m	d	mm (AWG)	10,1 (14)		12,1 (11)			14,7(9)	
Cable Type (sensor)		Length 3 m	d	mm (AWG)	4,9 (26)						
Cable Life	Minimum			5,000,000 cycles		3-5 millones cycles					
Bending Radius Static	Minimum			4x cable diameter		5x cable diameter					
Bending Radius Dynamic	Minimum			7,5x cable diameter		10x cable diameter					

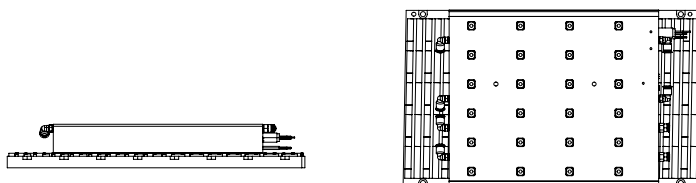
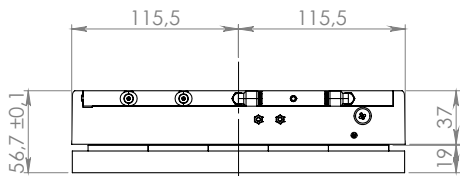
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

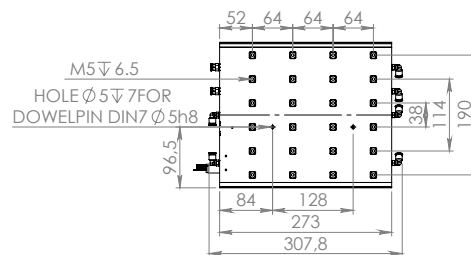
*** Depending on bending radius, velocity and acceleration.

KMC80S Series - Iron core linear motor

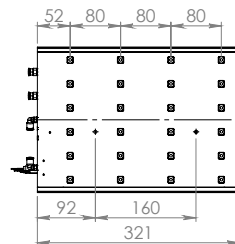
MAGNET PLATES



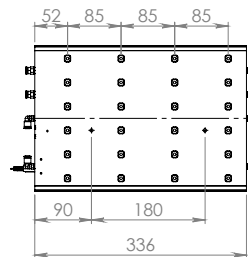
KMC80S-II34H



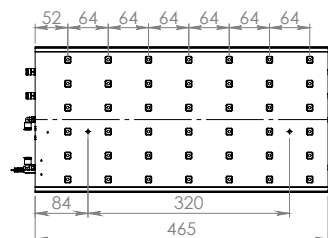
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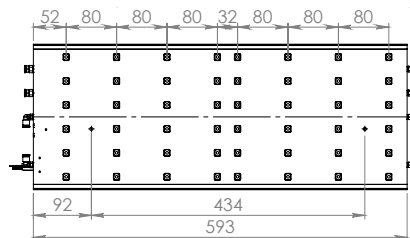
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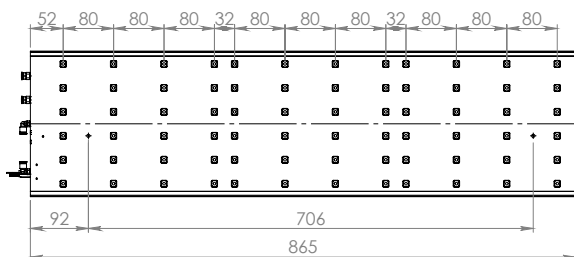
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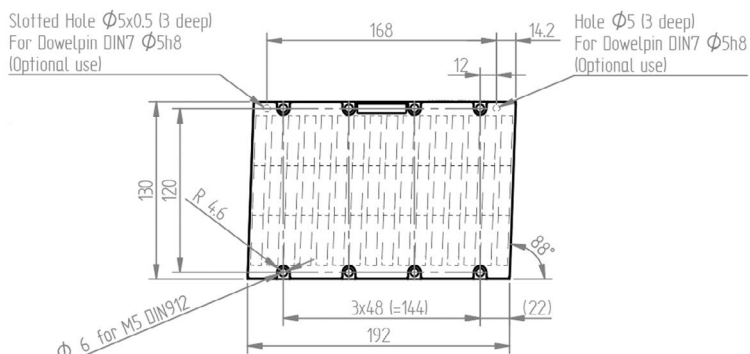
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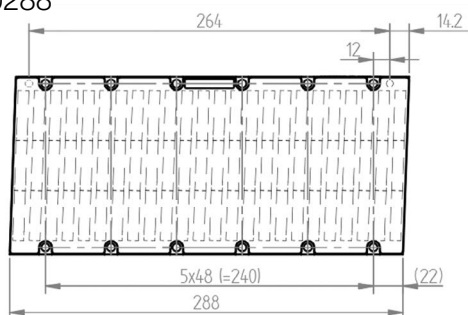
KMC80S-II13H



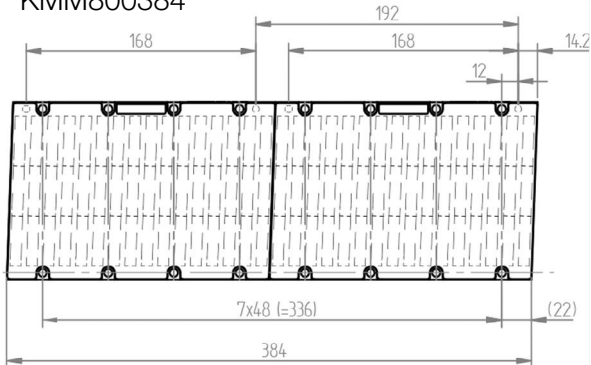
KMM800192



KMM800288



KMM800384

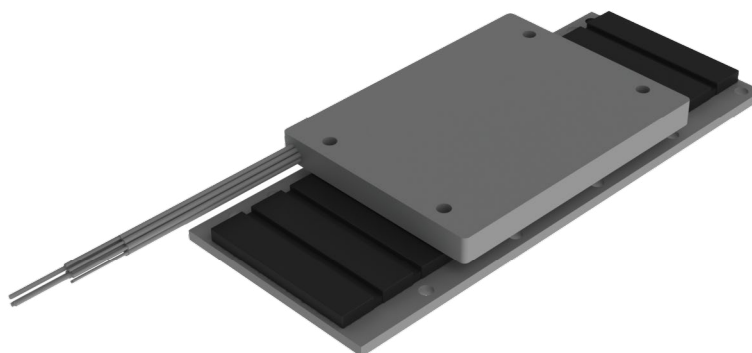


Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
* All sizes are in mm

KMC89S Series - Ironless linear motor

Dimensions and specifications

Magnet plate dimensions		
Code	KMM8900066	KMM8900099
Le (mm)	66	99
M5 bolts	8	10
Mass (kg/m)	1,06	
<i>Magnet yokes can be butted together.</i>		
Code	KMM8900115	KMM8900264
Le (mm)	115	264
M5 bolts	12	26
Mass (kg/m)	1,06	
<i>Magnet yokes can be butted together.</i>		



		Parameter	Remarks	Sym	Unit	KMC89S	
Performance	Winding type					UI02H	UI04H
	Motortype, max voltage ph-ph					3-phase synchronous Iron core, 45V _{ac rms} (60V _{dc})	
	Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N	20	40	
	Continuous force*	Coils @ 110°C	F _c	N	6	12	
	Maximum speed**	@ 600 V	V _{max}	m/s	10,0		
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	6		
	Motor constant	Coils @ 25°C	S	N ² /W	3	3	
Electrical	Peak current	Magnet @ 25°C	i _p	A _{rms}	3,3	6,7	
	Continuous current air cooled	Coils @ 110°C	I _c	A _{rms}	1,0	2,0	
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	5		
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	4,75	2,375	
	Induction per phase	l < 0.6 lp	l _{ph}	mH	0,8	0,4	
Electrical time constant	Coils @ 25°C	T _e	ms	0,16			
Thermal	Max. continuous power loss	All coils	P _c	W	15	30	
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	3,58	1,79	
	Temperature cut-off / sensor				None		
Mechanical	Coil unit weight	ex. cables	W	kg	0,03	0,05	
	Coil unit length	ex. cables	L	mm	56	89	
	Motor attraction force	rms @ 0 A	F _a	N	0	0	
	Magnet pitch NN		t	mm	16,5		

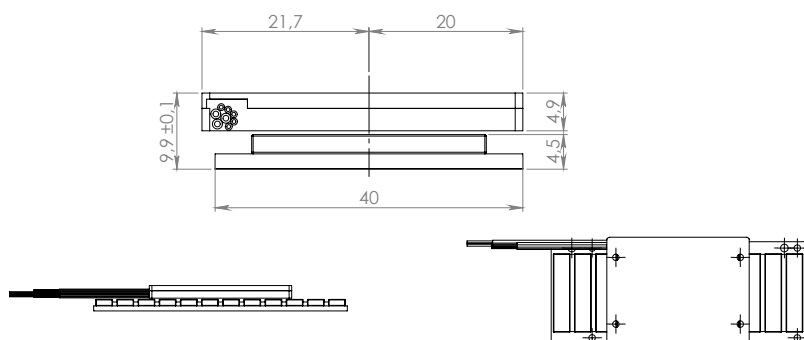
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

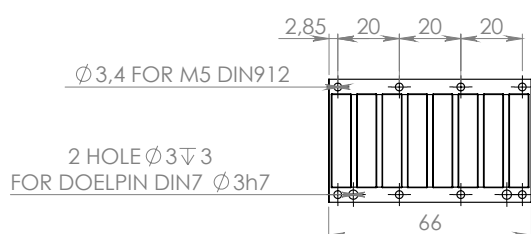
*** Depending on bending radius, velocity and acceleration.

KMC89S Series - Ironless linear motor

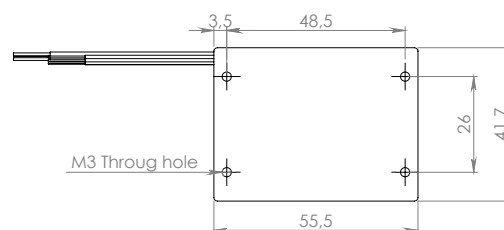
MAGNET PLATES



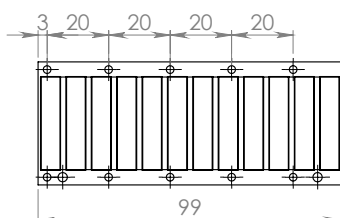
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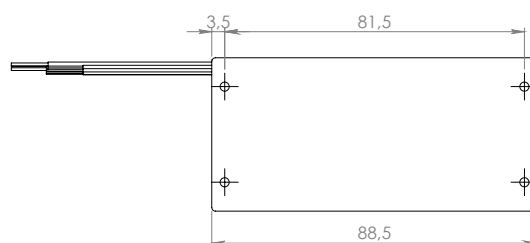
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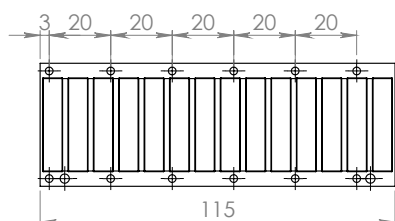
KMM8900099



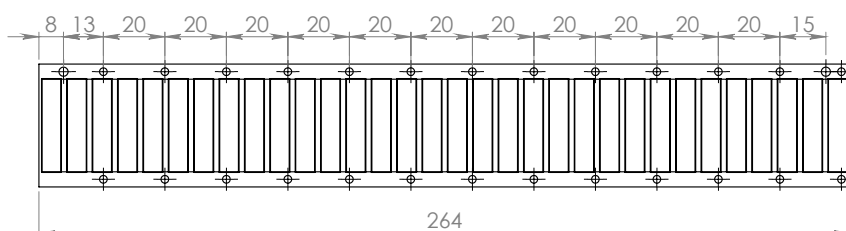
KMC89S-UI04H



KMM8900115



KMM8900264

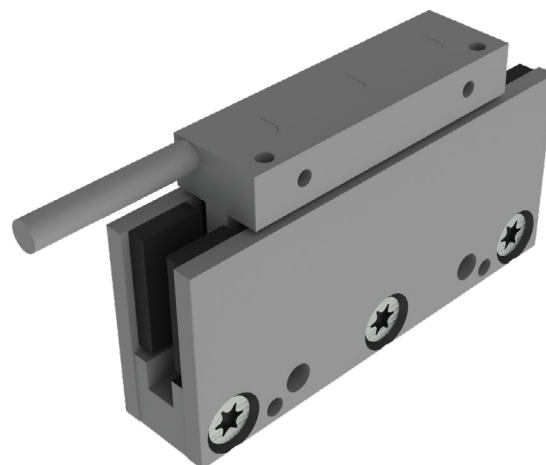


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* All sizes are in mm

KMC90S Series - Ironless linear motor

Dimensions and specifications



Magnet plate dimensions

Code	KMM9000072	KMM9000096	KMM9000144
Le (mm)	72	96	144
M5 bolts	2	3	4
Mass (kg/m)	2,3		
<i>Magnet plates can be butted together.</i>			

		Parameter	Remarks	Sym	Unit	KMC90S	
Performance	Winding type					UI04H	UI09H
	Motor type, max voltage ph-ph					3-phase synchronous Iron core, 45V _{ac rms} (60V _{dc})	
	Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N		46	92
	Continuous force*	Coils @ 110°C	F _c	N		11,5	23
	Maximum speed**	@ 600 V	V _{max}	m/s		5	
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}		7,3	
Electrical	Motor constant	Coils @ 25°C	S	N ² /W		7,5	15
	Peak current	Magnet @ 25°C	i _p	A _{rms}		6,3	12,6
	Continuous current air cooled	Coils @ 110°C	I _c	A _{rms}		1,6	3,2
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s		6	
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω		2,4	1,175
	Induction per phase	l < 0.6 lp	L _{ph}	mH		0,8	0,4
Thermal	Electrical time constant	Coils @ 25°C	T _e	ms		0,355	
	Max. continuous power loss	All coils	P _c	W		24	47
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W		3,2	1,6
Mechanical	Temperature cut-off / sensor					PTC 1kΩ / NTC	
	Coil unit weight	ex. cables	W	kg		0,038	0,075
	Coil unit length	ex. cables	L	mm		49	97
	Motor attraction force	rms @ 0 A	F _a	N		0	0
	Magnet pitch NN		t	mm		24	
	Cable mass		m	kg/m		0,065	
	Cable Type (power FLEX)		d	mm (AWG)		4,5 (24)	
	Cable Type (power)	Length 3 m	d	mm (AWG)		4,5 (22)	
	Cable Type (sensor)	Length 3 m	d	mm (AWG)		4,9 (26)	
	Cable Life	Minimum				12,000,000 cycles	
Bending Radius Static	Minimum				4x cable diameter		
Bending Radius Dynamic	Minimum				7,5x cable diameter		

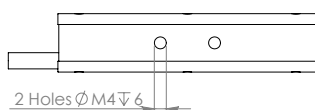
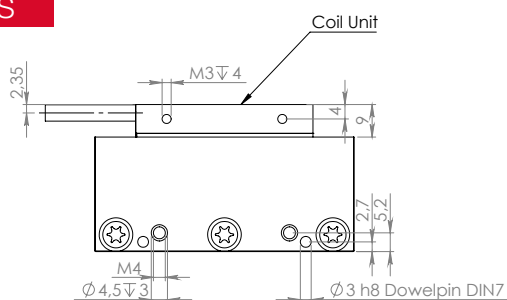
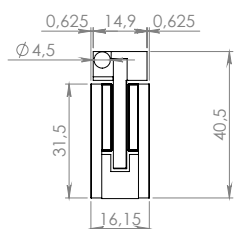
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

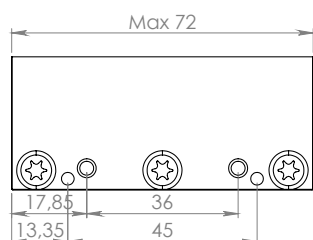
*** Depending on bending radius, velocity and acceleration.

KMC90S Series - Ironless linear motor

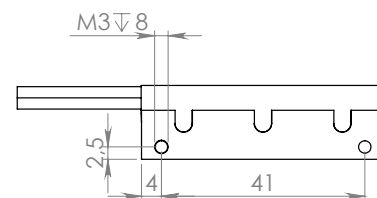
MAGNET PLATES



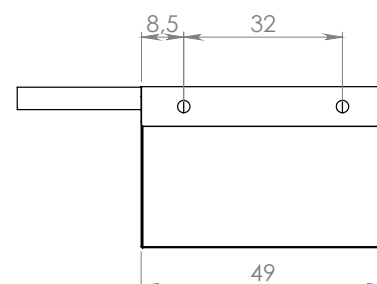
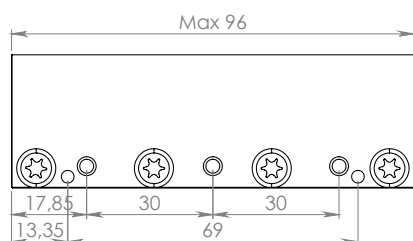
KMM9000072



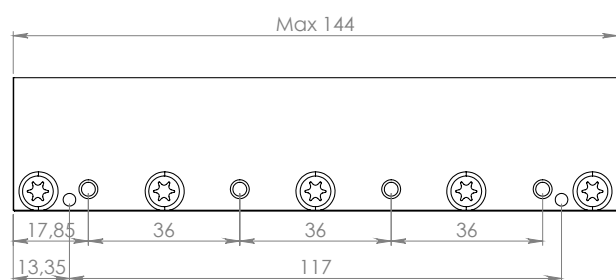
KMC90S-IU04N



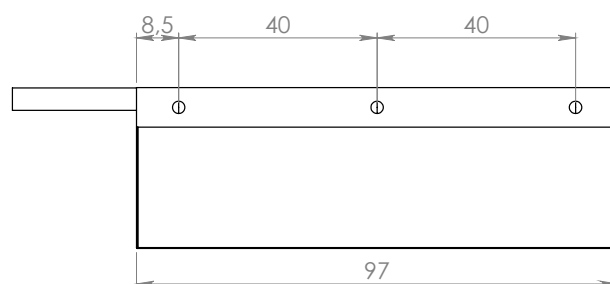
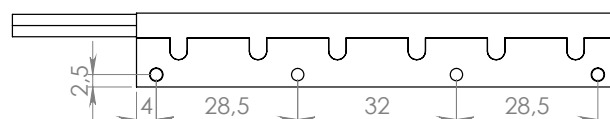
KMM9000096



KMM9000144



KMC90S-IU09H

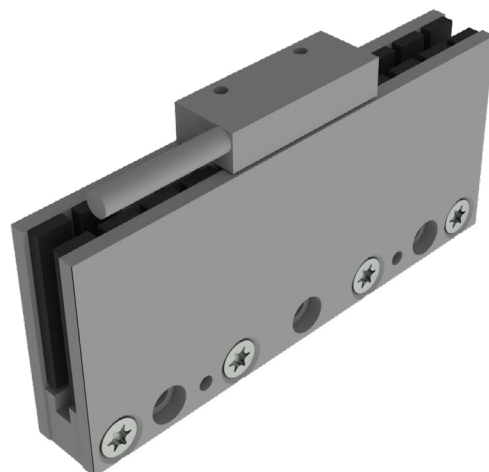


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* All sizes are in mm

KMC91S Series - Ironless linear motor

Dimensions and specifications



Magnet plate dimensions

Code	KMM910066	KMM910099	KMM910264
Le (mm)	66	99	264
M5 bolts	2	3	8
Mass (kg/m)	3,2		

Magnet plates can be butted together.

		Parameter	Remarks	Sym	Unit	KMC91S	
Performance	Winding type					UI03H	UI07H
	Motor type, max voltage ph-ph					3-phase synchronous Ironless, 45V _{ac rms} (60V _{dc})	
	Peak force @ 20°C/s increase	Magnet @ 25°C	F _u	N	36	72	
	Continuous force*	Coils @ 80°C	F _c	N	10	20	
	Maximum speed**	@ 60 V	V _{max}	m/s	5	5	
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	11,4	11,4	
	Motor constant	Coils @ 25°C	S	N ² /W	9,2	18,3	
	Electrical	Peak current	Magnet @ 25°C	I _p	A _{rms}	3,1	6,2
Maximum continuous current		Coils @ 80°C	I _c	A _{rms}	0,87	1,75	
Back EMF Phase-Phase _{peak}			B _{emf}	V/m/s	9,3	9,3	
Resistance per phase*		Coils @ 25°C ex. cable	R _{ph}	Ω	4,7	2,4	
Induction per phase			I _{ph}	mH	0,75	0,38	
Electrical time constant*		Coils @ 25°C	T _e	ms	0,16	0,16	
Thermal	Max. continuous power loss	All coils	P _c	W	13	26	
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	3,6	1,8	
	Thermal time constant*	up to 63% max. coiltemp.	T _{th}	s	25	25	
	Temperature sensor				none	none	
Mechanical	Coil unit weight	ex. cables	W	kg	0,031	0,062	
	Coil unit length	ex. cables	L	mm	34	67	
	Motor attraction force		F _a	N	0	0	
	Magnet pitch NN		t	mm	16,5	16,5	
	Cable mass		m	kg/m	0,07	0,07	
	Cable Type (power)	Length 3 m	d	mm (AWG)	4,3 (24)		
	Cable Type (sensor)				N/A		
	Cable life (Power FLEX)***	minimum			15,000,000 cycles		
	Bending radius static	minimum			5x cable diameter		
	Bending radius dynamic	minimum			8x cable diameter		

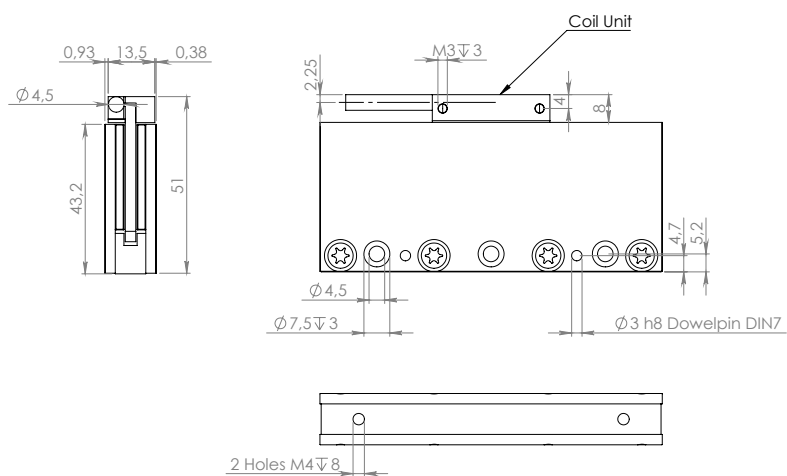
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

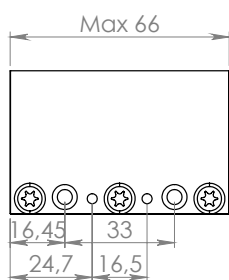
*** Depending on bending radius, velocity and acceleration.

KMC91S Series - Ironless linear motor

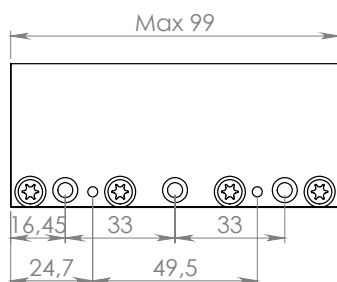
MAGNET PLATES



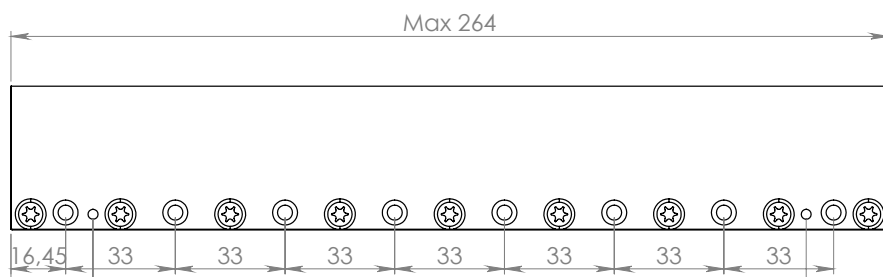
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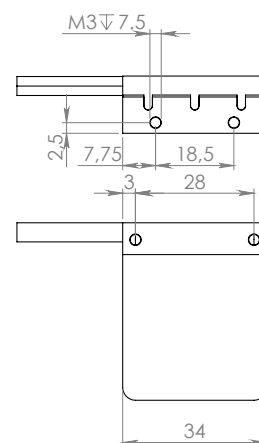
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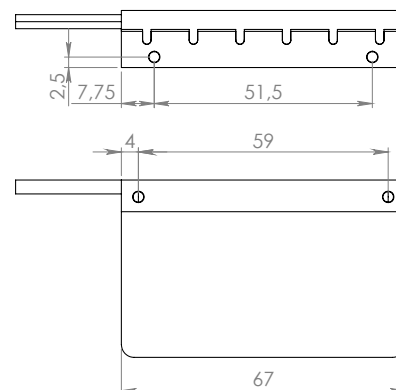
KMM910264



KMC91S-UI03H



KMC91S-UI07H

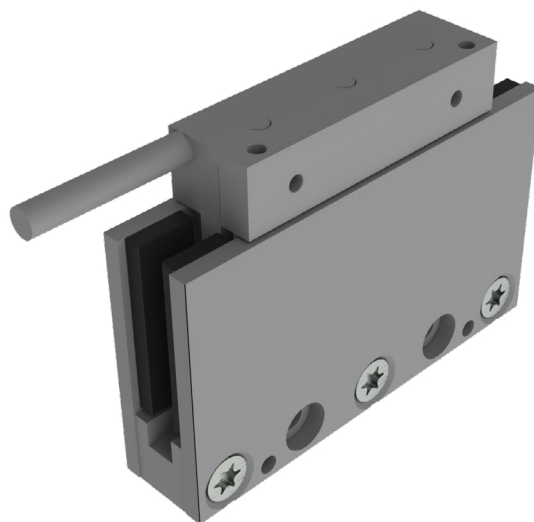


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* All sizes are in mm

KMC92S Series - Ironless linear motor

Dimensions and specifications



Magnet plate dimensions

Code	KMM920072	KMM920120
Le (mm)	72	120
M5 bolts	2	3
Mass (kg/m)	3,2	

Magnet plates can be butted together.

		Parameter	Remarks	Sym	Unit	KMC92S	
Performance	Winding type					UI04H	UI08H
	Motortype, max voltage ph-ph					3-phase synchronous Ironless, 45V _{ac rms} (60V _{dc})	
	Peak force @ 20°C/s increase	Magnet @ 25°C	F _u	N	42,5	85	
	Continuous force*	Coils @ 110°C	F _c	N	19,5	39	
	Maximum speed**	@ 60 V	V _{max}	m/s	5,1	5,1	
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	12,3	12,3	
	Motor constant	Coils @ 25°C	S	N ² /W	14,6	29,2	
Electrical	Peak current	Magnet @ 25°C	I _p	A _{rms}	3,5	6,9	
	Maximum continuous current	Coils @ 110°C	I _c	A _{rms}	1,58	3,17	
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	10,1	10,1	
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	3,5	1,8	
	Induction per phase		I _{ph}	mH	1,24	0,62	
	Electrical time constant*	Coils @ 25°C	T _e	ms	0,36	0,36	
Thermal	Max. continuous power loss	All coils	P _c	W	35	70	
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	2,4	1,2	
	Thermal time constant*	up to 63% max. coiltemp.	T _{th}	s	34	34	
	Temperature sensor				NTC	NTC	
Mechanical	Coil unit weight	ex. cables	W	kg	0,045	0,087	
	Coil unit length	ex. cables	L	mm	49	97	
	Motor attraction force		F _a	N	0	0	
	Magnet pitch NN		t	mm	24	24	
	Cable mass		m	kg/m	0,07	0,07	
	Cable Type (power and sensor)	Length 3 m	d	mm (AWG)	4,3 (24)		
	Cable life (FLEX)***	minimum			15,000,000 cycles		
	Bending radius static	minimum			5x cable diameter		
Bending radius dynamic	minimum			8x cable diameter			

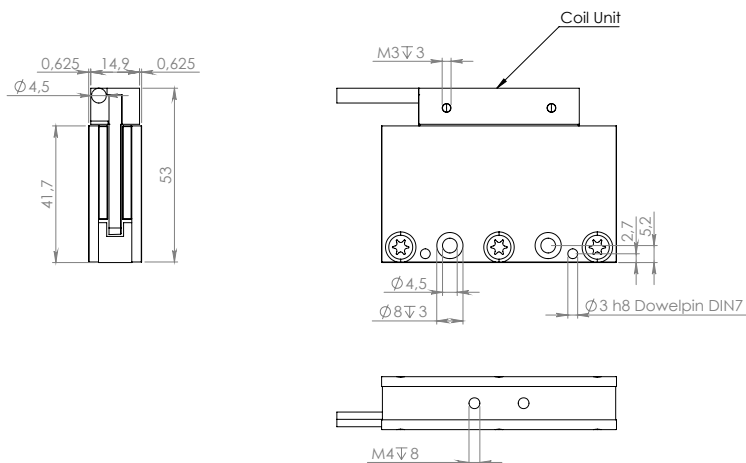
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

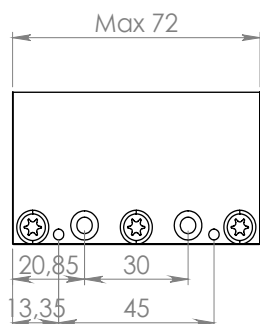
*** Depending on bending radius, velocity and acceleration.

KMC92S Series - Ironless linear motor

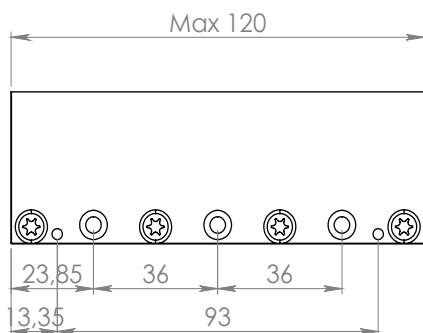
MAGNET PLATES



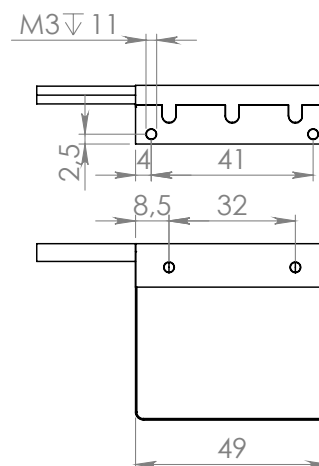
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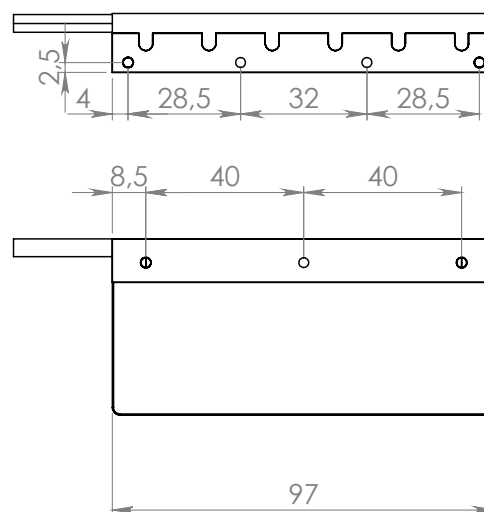
KMM920120



KMC92S-UI04H



KMC92-UI08H



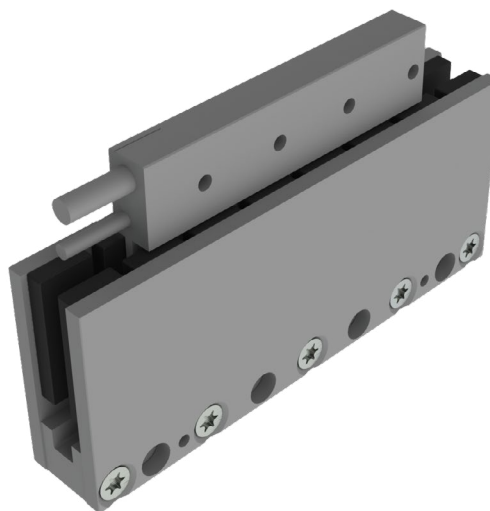
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* All sizes are in mm

KMC93S Series - Ironless linear motor

Dimensions and specifications

Magnet plate dimensions		
Code	KMM930090	KMM930120
Le (mm)	90	120
M5 bolts	3	4
Mass (kg/m)	4,8	
Magnet yokes can be butted together.		
Code	KMM930150	KMM930390
Le (mm)	150	390
M5 bolts	6	13
Mass (kg/m)	4,8	
Magnet yokes can be butted together.		



Parameter		Remarks	Sym	Unit	KMC93S							
Performance	Winding type				UI01N	UI01H	UI02N	UI02H	UI03N	UI03H	UI04N	UI04H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 230 V _{ac rms} (V _{dc})							
	Ultimate force @ 20°C/s increase	Magnet @ 25°C	F _u	N	100		200		300		400	
	Continuous force*	Coils @ 110°C	F _c	N	29		58		87		116	
	Maximum speed**	@ 300 V	V _{max}	m/s	10	18	10	18	10	17	10	16
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	36,3	19,9	36,3	19,9	36,3	19,9	36,3	19,9
Electrical	Motor constant	Coils @ 25°C	S	N ² /W	24		48		71		95	
	Peak current	Magnet @ 25°C	i _p	A _{rms}	2,8	5,0	5,5	10,0	8,3	15,0	11,0	20,0
	Maximum continuous current	Coils @ 110°C	I _c	A _{rms}	0,8	1,5	1,6	2,9	2,4	4,4	3,2	5,8
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	30	16	30	16	30	16	30	16
	Resistance per phase*	Coils @ 25°C ex. cable	R _{ph}	Ω	18,5	5,5	9,3	2,8	6,2	1,8	4,6	1,4
	Induction per phase		L _{ph}	mH	6	1,8	3	0,9	2	0,6	1,5	0,4
Thermal	Electrical time constant*	Coils @ 25°C	T _e	ms	0,35							
	Max. continuous power loss	All coils	P _c	W	47		95		142		190	
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	1,8		0,9		0,6		0,45	
	Thermal time constant*	up to 63% max. coiltemp.	T _{th}	s	36							
Mechanical	Temperature cut-off / sensor				PTC 1kΩ / NTC							
	Coil unit weight	ex. cables	W	kg	0,084		0,162		0,240		0,318	
	Coil unit length	ex. cables	L	mm	78		138		198		258	
	Motor attraction force		F _a	N	0		0		0		0	
	Magnet pitch NN		t	mm	30							
	Cable mass		m	kg/m	0,08							
Cable Type (power)	Length 3 m	d	mm (AWG)	5,3 (22)								
	Length 3 m	d	mm (AWG)	3,2 (26)								

* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

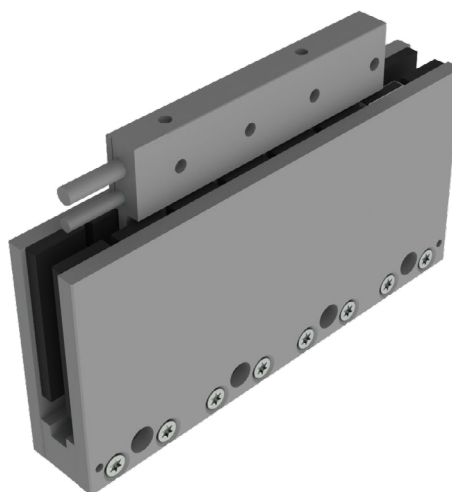
** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

*** Depending on bending radius, velocity and acceleration.

KMC95S Series - Ironless linear motor

Dimensions and specifications

Magnet plate dimensions		
Code	KMM950126	KMM950168
Le (mm)	126	168
M5 bolts	3	4
Mass (kg/m)	11,2	
<i>Magnet yokes can be butted together.</i>		
Code	KMM950210	KMM950546
Le (mm)	210	546
M5 bolts	5	13
Mass (kg/m)	11,2	
<i>Magnet yokes can be butted together.</i>		



	Parameter	Remarks	Sym	Unit	KMC95S													
					UI02N	UI02H	UI05N	UI05H	UI07N	UI07H	UI10N	UI10H	UI12N	UI12H				
Performance	Winding type				UI02N	UI02H	UI05N	UI05H	UI07N	UI07H	UI10N	UI10H	UI12N	UI12H				
	Motor type, max voltage ph-ph				3-phase synchronous Iron core, 230V _{ac rms} (325V _{dc})													
	Peak force @ 20°C/s increase	Magnet @ 25°C	F _p	N	240		480		720		960		1200					
	Continuous force*	Coils @ 110°C	F _c	N	70		140		210		280		350					
	Maximum speed**	@ 300 V	V _{max}	m/s	5	12	5	12	5	12	5	12	5	12				
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	68	27,5	68	27,5	68	27,5	68	27,5	68	27,5				
Electrical	Motor constant	Coils @ 25°C	S	N ² /W	97		195		290		390		485					
	Peak current	Magnet @ 25°C	I _p	A _{rms}	3,5	8,7	7	17,5	10,5	26,2	14,1	35	17,8	44				
	Maximum continuous current	Coils @ 110°C	I _c	A _{rms}	1,03	2,6	2,1	5,1	3,1	7,6	4,2	10,2	5,2	12,9				
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	55,5	22,5	55,5	22,5	55,5	22,5	55,5	22,5	55,5	22,5				
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	15,9	2,6	8,0	1,28	5,3	0,85	4,0	0,64	3,3	0,53				
	Induction per phase		L _{ph}	mH	13	2,0	6,5	1,0	4,2	0,7	3,2	0,5	3	0,4				
Thermal	Electrical time constant*	Coils @ 25°C	t _e	ms	0,8													
	Max. continuous power loss	All coils	P _c	W	67		134		200		270		335					
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	1,3		0,65		0,43		0,32		0,26					
	Thermal time constant*	up to 63% max. coiltemp.	t _{th}	s	72													
Mechanical	Temperature cut-off / sensor				PTC 1kΩ / NTC													
	Coil unit weight	ex. cables	W	kg	0,25		0,47		0,69		0,91		1,13					
	Coil unit length	ex. cables	L	mm	106		190		274		358		442					
	Motor attraction force		F _a	N	0		0		0		0		0					
	Magnet pitch NN		t	mm	42													
	Cable mass		m	kg/m	0,09		0,09		0,09		0,105		0,105					
	Cable type (power)	Length 3 m	d	mm (AWG)	5,8 (20)						6,4 (18)							
Cable Type (sensor)	Length 3 m	d	mm (AWG)	5,8 (26)						4,3 (26)								

* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

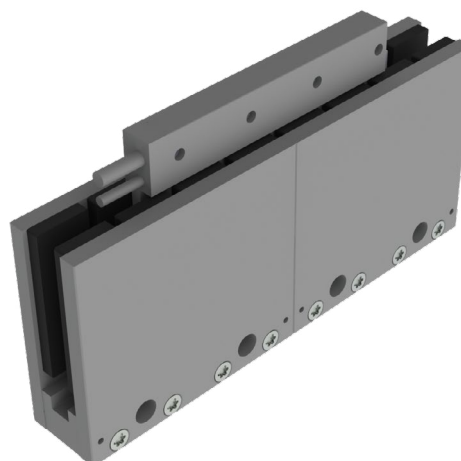
** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

*** Depending on bending radius, velocity and acceleration.

KMC97S Series - Ironless linear motor

Dimensions and specifications

Magnet plate dimensions			
Code	KMM970144	KMM970171	KMM970456
Le (mm)	144	171	456
M5 bolts	2	3	8
Mass (kg/m)	19,1		
<i>Magnet plates can be butted together.</i>			



Parameter		Remarks	Sym	Unit	KMC97S									
Performance	Winding type				UI64N	UI64H	UI13N	UI13H	UI19N	UI19H	UI26N	UI26H	UI39N	UI39H
	Motor type, max voltage ph-ph				3-phase synchronous Iron core, 230V _{ac rms} (320V _{dc})									
	Peak force @ 20°C/s increase	Magnet @ 25°C	F _p	N	645		1290		1935		2580		3870	
	Continuous force*	Coils @ 110°C	F _c	N	125		250		375		500		750	
	Maximum speed**	@ 300 V	V _{max}	m/s	3,1	7,7	3,1	7,7	3,1	7,7	3,1	7,7	3,1	7,7
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	107	43,4	107	43,4	107	43,4	107	43,4	107	43,4
Electrical	Motor constant	Coils @ 25°C	S	N ² /W	242		483		725		966		1449	
	Peak current	Magnet @ 25°C	I _p	A _{rms}	6,0	14,9	12,1	29,7	18,1	44,6	24,1	59,4	36,2	89,2
	Maximum continuous current	Coils @ 110°C	I _c	A _{rms}	1,2	2,9	2,3	5,8	3,5	8,6	4,7	11,5	7,0	17,3
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	87	35	87	35	87	35	87	35	87	35
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	15,8	2,6	7,9	1,29	5,3	0,86	3,95	0,65	2,6	0,43
	Induction per phase		L _{ph}	mH	28,4	4,7	14,2	2,3	9,5	1,5	7,1	1,2	4,7	0,8
Thermal	Electrical time constant*	Coils @ 25°C	t _e	ms	1,8									
	Max. continuous power loss	All coils	P _c	W	88		176		264		352		528	
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	1,03		0,52		0,34		0,25		0,18	
Mechanical	Temperature cut-off / sensor				PTC 1kΩ / NTC									
	Coil unit weight	ex. cables	W	kg	0,54		0,94		1,34		1,74		2,54	
	Coil unit length	ex. cables	L	mm	134		248		362		476		704	
	Motor attraction force		F _a	N	0		0		0		0		0	
	Magnet pitch NN		t	mm	57									

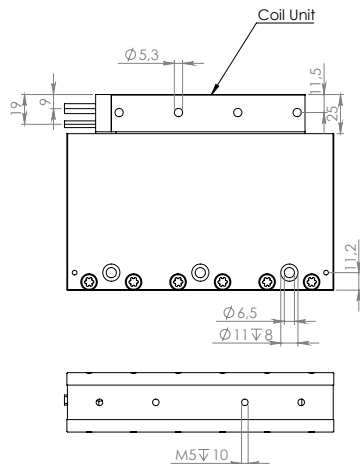
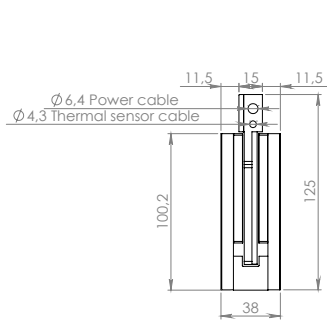
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

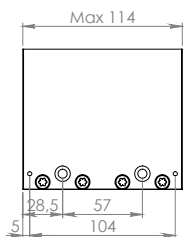
*** Depending on bending radius, velocity and acceleration.

KMC97S Series - Ironless linear motor

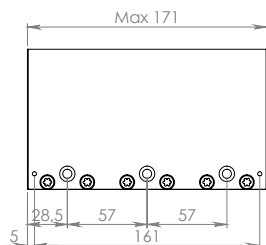
MAGNET PLATES



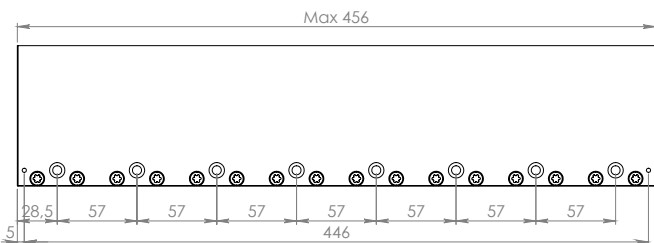
KMM970144



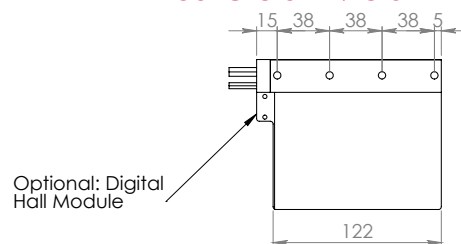
KMM970171



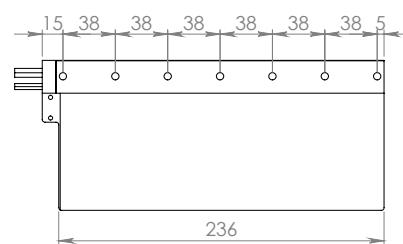
KMM970456



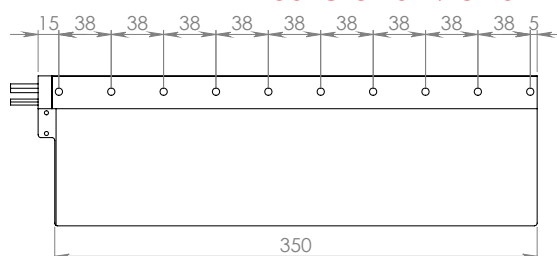
KMC97S-UI64N / UI64H



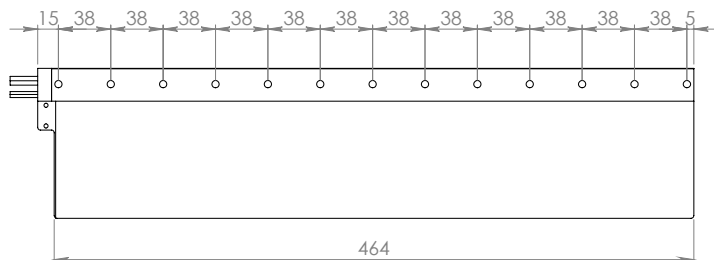
KMC97S-UI13N / UI13H



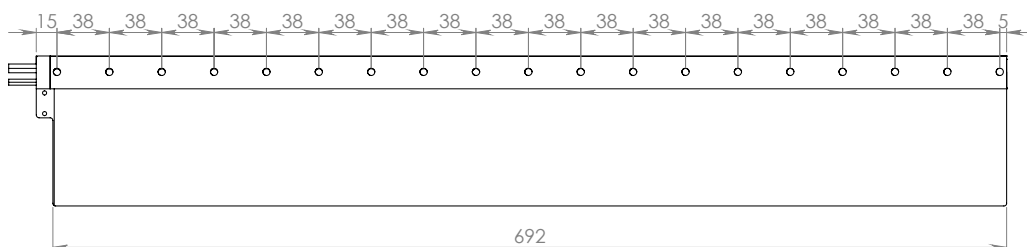
KMC97S-UI19N / UI19H



KMC97S-UI26N / UI26H



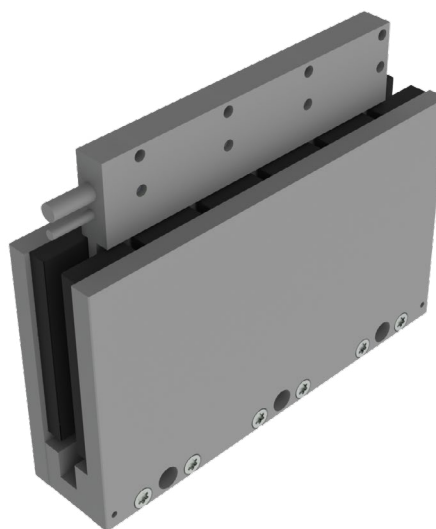
KMC97S-UI39N / UI39H



Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
* All sizes are in mm

KMC98S Series - Ironless linear motor

Dimensions and specifications



Magnet plate dimensions

Code	KMM980140	KMM980210	KMM980420
Le (mm)	140	210	420
M5 bolts	2	3	6
Mass (kg/m)	32		

Magnet plates can be butted together.

	Parameter	Remarks	Sym	Unit	KMC98S											
					UI10N	UI10H	UI20N	UI20H	UI30N	UI30H	UI40N	UI40H	UI50N			
Performance	Winding type				UI10N	UI10H	UI20N	UI20H	UI30N	UI30H	UI40N	UI40H	UI50N			
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 230V _{ac rms} (320V _{dc})											
	Peak force @ 20°C/s increase	Magnet @ 25°C	F _p	N	1000		2000		3000		4000		5000			
	Continuous force*	Coils @ 110°C	F _c	N	250		500		750		1000		1250			
	Maximum speed**	@ 300 V	V _{max}	m/s	1,6	3,2	1,6	3,2	1,6	3,2	1,6	3,2	1,6			
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	177	84	177	84	177	84	177	84	177			
Electrical	Motor constant	Coils @ 25°C	S	N ² /W	913		1826		2739		3652		4565			
	Peak current	Magnet @ 25°C	I _p	A _{rms}	5,6	11,9	11,3	23,8	16,9	35,7	22,6	47,6	28,2			
	Maximum continuous current	Coils @ 110°C	I _c	A _{rms}	1,5	3,0	3,0	6,0	4,5	6,0	12,0	7,0	-			
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	145	69	126	60	145	69	126	60	145			
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	11,5	2,84	5,75	1,45	3,8	0,95	2,9	0,75	2,3			
	Induction per phase		L _{ph}	mH	34,5	8,5	17,3	4,4	11,4	2,9	8,7	2,3	6,9			
Thermal	Electrical time constant*	Coils @ 25°C	t _e	ms	3											
	Max. continuous power loss	All coils	P _c	W	92		183		275		367		459			
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	0,8		0,4		0,3		0,2		0,15			
Mechanical	Temperature cut-off / sensor				PTC 1kΩ / NTC											
	Coil unit weight	ex. cables	W	kg	0,9		1,8		2,7		3,6		4,5			
	Coil unit length	ex. cables	L	mm	163		302,5		442		581,5		721			
	Motor attraction force		F _a	N	0		0		0		0		0			
	Magnet pitch NN		t	mm	70											
	Cable Type (power)	Length 3 m	d	mm (AWG)	7.4(18)											
	Cable Type (sensor)	Length 3 m	d	mm (AWG)	4.9(26)											
	Cable Life Time	Minimum			5,000,000 cycles											
	Bending Radius Static	Minimum			4x cable diameter											
Bending Radius Dynamic	Minimum			7,5x cable diameter												

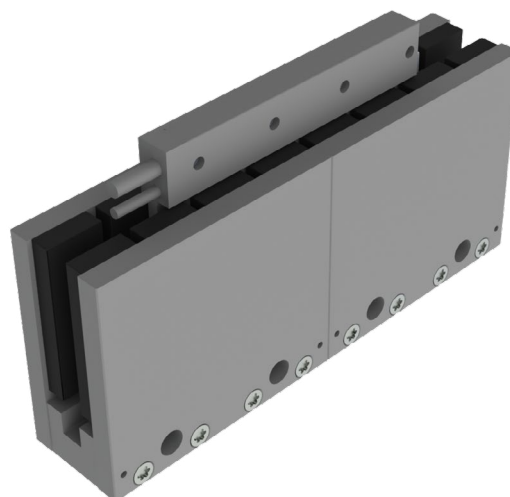
* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

*** Depending on bending radius, velocity and acceleration.

KMC99S Series - Ironless linear motor

Dimensions and specifications



Magnet plate dimensions

Code	KMM990114	KMM990171	KMM990456
Le (mm)	114	171	456
M5 bolts	2	3	8
Mass (kg/m)	13,5		
Magnet plates can be butted together.			

Parameter		Remarks	Sym	Unit	KMC99S									
Performance	Winding type				UI73N	UI73H	UI15N	UI15H	UI22N	UI22H	UI29N	UI29H	UI44N	UI44H
	Motor type, max voltage ph-ph				3-phase synchronous Iron core, 230V _{ac rms} (320V _{dc})									
	Peak force @ 20°C/s increase	Magnet @ 25°C	F _p	N	730		1460		2190		2920		4380	
	Continuous force*	Coils @ 110°C	F _c	N	145		290		435		580		870	
	Maximum speed**	@ 300 V	V _{max}	m/s	2,6	6,8	2,6	6,8	2,6	6,8	2,6	6,8	2,6	6,8
	Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	127	49	127	49	127	49	127	49	127	49
Electrical	Motor constant	Coils @ 25°C	S	N ² /W	340		680		1020		1359		2039	
	Peak current	Magnet @ 25°C	I _p	A _{rms}	5,7	14,9	11,5	29,8	17,2	44,7	23,0	59,6	34,5	89,4
	Maximum continuous current	Coils @ 110°C	I _c	A _{rms}	1,1	3,0	2,3	5,9	3,4	8,9	4,6	11,8	6,9	17,8
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	104	40	104	40	104	40	104	40	104	40
	Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	15,82	2,6	7,9	1,29	5,3	0,86	3,95	0,65	2,6	0,43
	Induction per phase		L _{ph}	mH	28,5	4,7	14,2	2,3	9,5	1,5	7,1	1,2	4,7	0,8
Thermal	Electrical time constant*	Coils @ 25°C	t _e	ms	1,8									
	Max. continuous power loss	All coils	P _c	W	119		238		357		476		713	
	Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	1,03		0,52		0,34		0,25		0,18	
Mechanical	Temperature cut-off / sensor				PTC 1kΩ / NTC									
	Coil unit weight	ex. cables	W	kg	0,54		0,94		1,34		1,74		2,54	
	Coil unit length	ex. cables	L	mm	134		248		362		476		704	
	Motor attraction force		F _a	N	0		0		0		0		0	
	Magnet pitch NN		t	mm	57									

* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

*** Depending on bending radius, velocity and acceleration.

KMC Linear motor coil

Type
KMC - Linear motor winding

KMC □ □ **S** - □ □ □ □ □ □ - □ □ □ □ - □ □

Motor size

- Size:**
 71 - KMC71S
 73 - KMC73S
 75 - KMC75S
 77 - KMC77S
 78 - KMC78S
 79 - KMC79S
 80 - KMC80S
 89 - KMC89S
 90 - KMC90S
 91 - KMC91S
 92 - KMC92S
 93 - KMC93S
 95 - KMC95S
 97 - KMC97S
 98 - KMC98S
 99 - KMC99S

Motorkraft

- Motor technology:**
II - Iron core motor
IU - Ironless motor
- Motor winding:**
N - Standard motor
H - High-speed motor
I - Without winding

Connectors

- Typ²⁾:**
00A - Side connector Y-TEC base
00M - Side connector AMP
01A - Side connector M23 base
04A - Cable with connector M23
05A - Cable without connector
06A - Cable with connector Y-TEC

Cable

Cable length in cm
Max. cable length 300 cm

Peak force, N (aircooled)¹⁾:

KMC71S	[01 - 110N 02 - 220N	KMC80S	[33 - 3360N 42 - 4200N 50 - 5040N 67 - 6720N 84 - 8400N 12 - 12600N	KMC97S	[06 - 645N 12 - 1290N 19 - 1935N 25 - 2580N 38 - 3870N
KMC73S	[01 - 120N 02 - 240N 05 - 480N 07 - 720N	KMC89S	[02 - 20N 04 - 40N	KMC98S	[04 - 42,5N 08 - 85N
KMC75S	[04 - 450N 09 - 900N 11 - 1125N 13 - 1350N 18 - 1800N 27 - 2700N	KMC90S	[04 - 46N 09 - 92N	KMC93S	[01 - 100N 02 - 200N 03 - 300N 04 - 400N
KMC77S	[18 - 1800N 22 - 2250N 45 - 4500N 71 - 7125N	KMC92S	[04 - 42,5N 08 - 85N	KMC95S	[02 - 240N 04 - 480N 07 - 720N 09 - 960N
KMC78S	[27 - 2700N 45 - 4500N 71 - 7125N	KMC93S	[02 - 200N 03 - 300N 04 - 400N	KMC97S	[06 - 645N 12 - 1290N 19 - 1935N 25 - 2580N 38 - 3870N
KMC79S	[27 - 2700N 33 - 3375N 40 - 4050N 54 - 5400N 67 - 6750N 10 - 10125N	KMC95S	[02 - 240N 04 - 480N 07 - 720N 09 - 960N 12 - 1200N		

¹⁾ Depending on the application and ambient temperature
²⁾ Water cooling

KMM Linear motor magnets

Type

KMM - Linear motor magnet

KMM□□**S** - □□□□

□□

Magnet size

Size:

71 - KMM71S
73 - KMM73S
75 - KMM75S
77 - KMM77S
78 - KMM78S
79 - KMM79S
80 - KMM80S
89 - KMM89S
90 - KMM90S
91 - KMM91S
92 - KMM92S
93 - KMM93S
95 - KMM95S
97 - KMM97S
98 - KMM98S
99 - KMM99S

□□□□

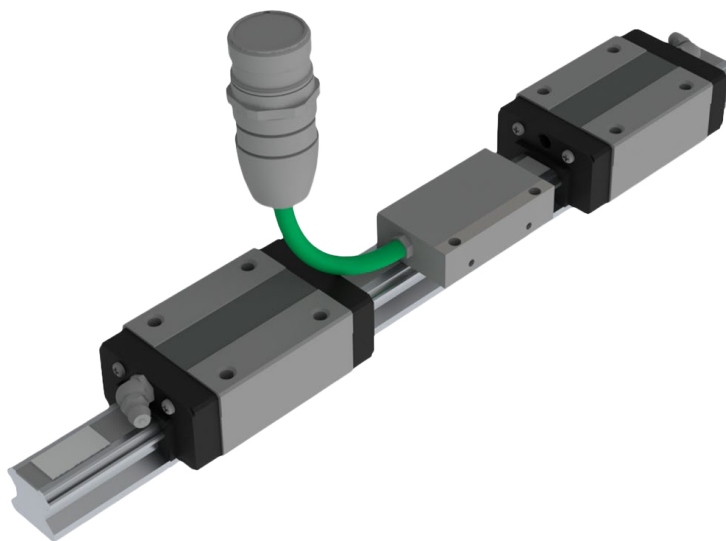
Magnet length

Length:

KMM71S	[	0064 - 64mm		KMM91S	[	0066 - 66mm
		0128 - 128mm				0099 - 99mm
				KMM92S	[	0264 - 264mm
KMM73S	[	0096 - 96mm				0072 - 72mm
		0144 - 144mm				0120 - 120mm
		0384 - 384mm		KMM93S	[	0090 - 90mm
KMM75S	[	0192 - 192mm				0120 - 120mm
		0288 - 288mm		KMM95S	[	0150 - 150mm
KMM77S	[	0192 - 192mm				0390 - 390mm
		0288 - 288mm		KMM97S	[	0126 - 126mm
KMM78S	[	0192 - 192mm				0168 - 168mm
		0288 - 288mm		KMM99S	[	0210 - 210mm
KMM79S	[	0192 - 192mm				0546 - 546mm
		0288 - 288mm		KMM91S	[	0144 - 144mm
KMM80S	[	0192 - 192mm				0171 - 171mm
		0288 - 288mm		KMM93S	[	0456 - 456mm
		0384 - 384mm				0140 - 140mm
KMM89S	[	0066 - 66mm		KMM95S	[	0210 - 210mm
		0099 - 99mm				0420 - 420mm
		0115 - 115mm		KMM97S	[	0114 - 114mm
		0264 - 264mm				0171 - 171mm
KMM90S	[	0072 - 72mm		KMM99S	[	0456 - 456mm
		0096 - 96mm				
		0144 - 144mm				

KEC00S Incremental encoder

Technical specifications



Inductive measuring systems

Inductive measuring systems are particularly suitable for applications with linear axes.

Due to its inductive measuring system, this system offers great reliability and resistance to dust, oils, and even wood chips. The electromagnetic fields do not affect correct operation of the measuring system.

The special properties of these measuring systems are therefore very suitable for use with direct drives and linear motors.

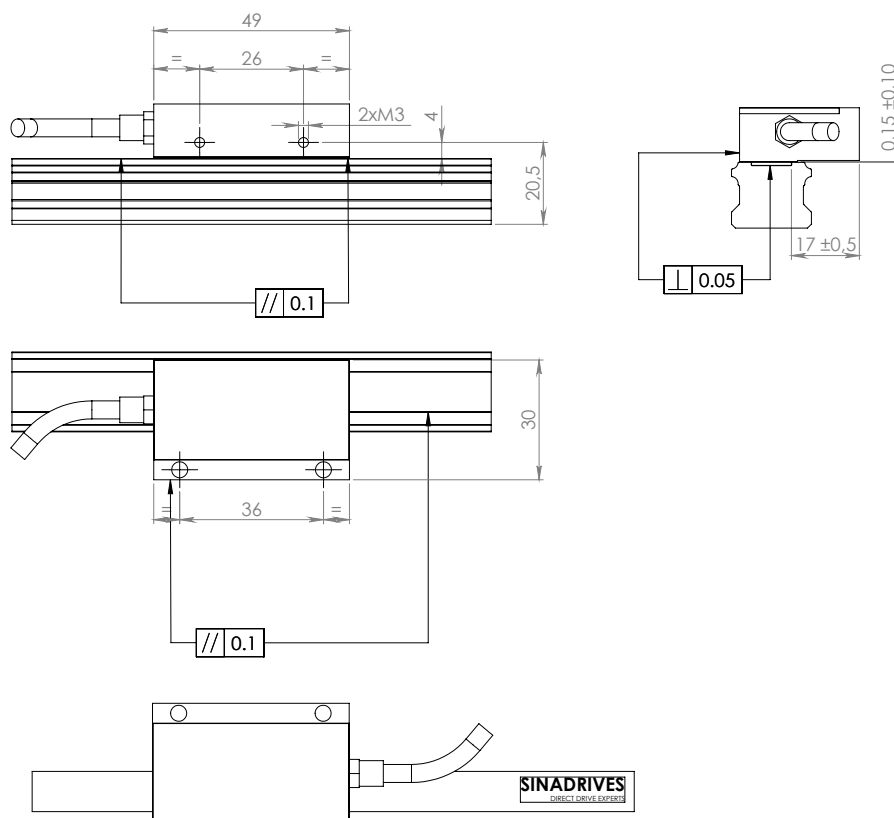
Magnetic measuring systems

Magnetic encoders provide excellent performance in dusty and contaminated environments. Due to the greater tolerance between encoder and measuring tape, this encoder is particularly suitable for long measurements.

	KEC00S - 0A	KEC00S - 2R
Measuring principle	Inductive	Magnetic
Maximum length	Up to 100 m	Up to 100 m
Resistance to dirt, oil, water, coolant and swarf	Very high	Very high
Resistance to electromagnetic interference and magnetic fields	Very high	Gering
Repeatability of the measuring system	+/- 5 µm	+/- 20 µm
Reading head output / Measuring system	1 Vss / 40 µm (SIN/COS) TTL / 1 µm	1 Vss / 2000 µm (SIN/COS) TTL / 1 µm

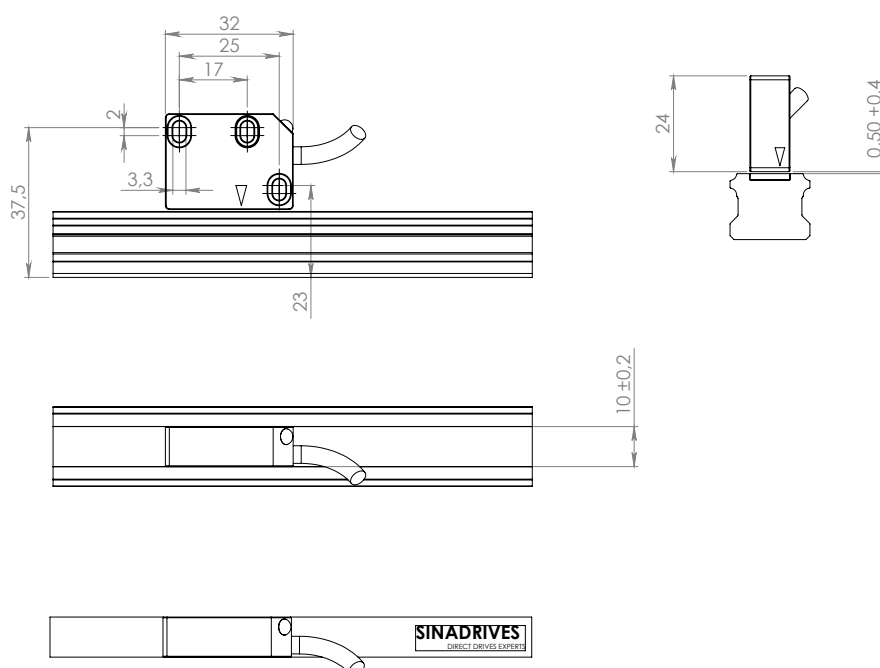
KEC00S - 0A Incremental encoder

Technical specifications



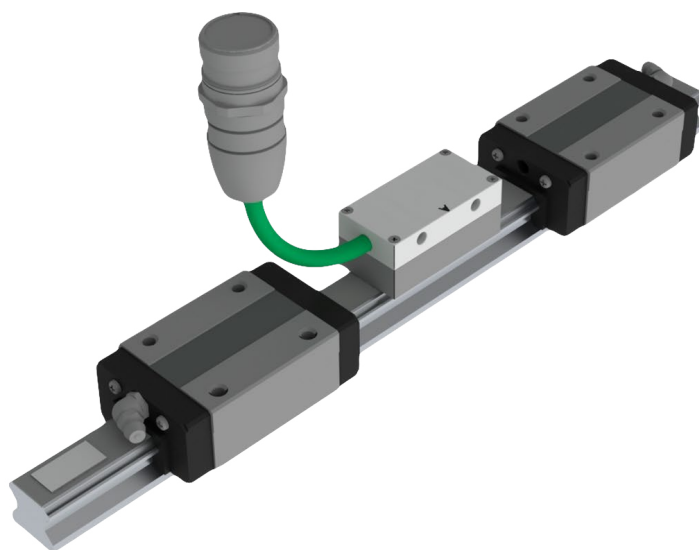
KEC00S - 2R Incremental encoder

Technical specifications



KEC03S Absolute encoder

Technical specifications



Inductive measuring systems

Inductive measuring systems are particularly suitable for applications with linear axes. Due to its inductive measuring system, this system offers great reliability and resistance to dust, oils, and even wood chips. The electromagnetic fields do not affect correct operation of the measuring system. The special properties of these measuring systems are therefore very suitable for use with direct drives and linear motors.

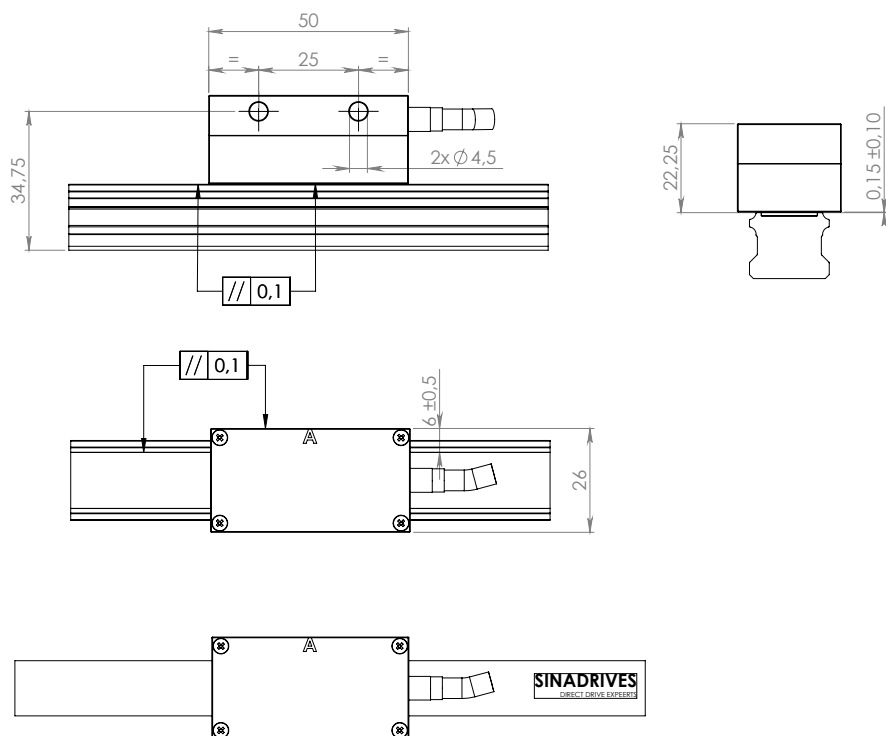
Magnetic measuring systems

Magnetic encoders provide excellent performance in dusty and contaminated environments. Due to the greater tolerance between encoder and measuring tape, this encoder is particularly suitable for long measurements.

	KEC03S - 3A	KEC03S - 5S
Measuring principle	Inductive	Magnetic
Maximum length	Up to 32 m	Up to 16 m
Resistance to dirt, oil, water, coolant and swarf	Very high	Very high
Resistance to electromagnetic interference and magnetic fields	Very high	Low
Repeatability of the measuring system	+/- 5 µm o +/- 10 µm	+/- 20 µm
Resolution of the measuring system	Until 100 nm	Until 1 µm
Reading head output / Measuring system	EnDat 2.2 EnDat 2.2 + Safety DriveCliq + Safety SSI + 1 Vss Fanuc Mitsubishi Biss/C	Hiperface Hiperface DSL

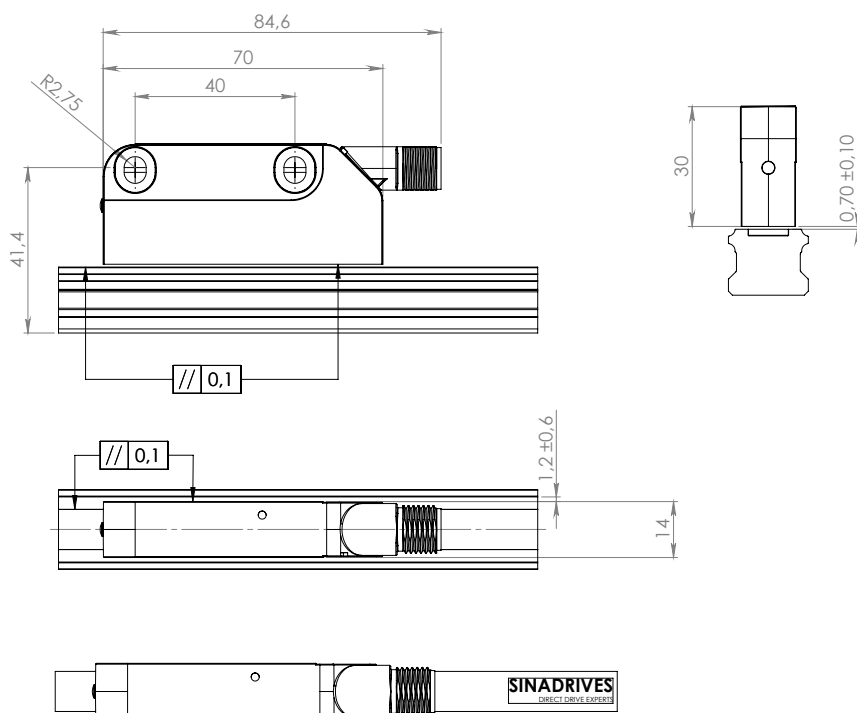
KEC03S - 3A Absolute encoder

Technical specifications

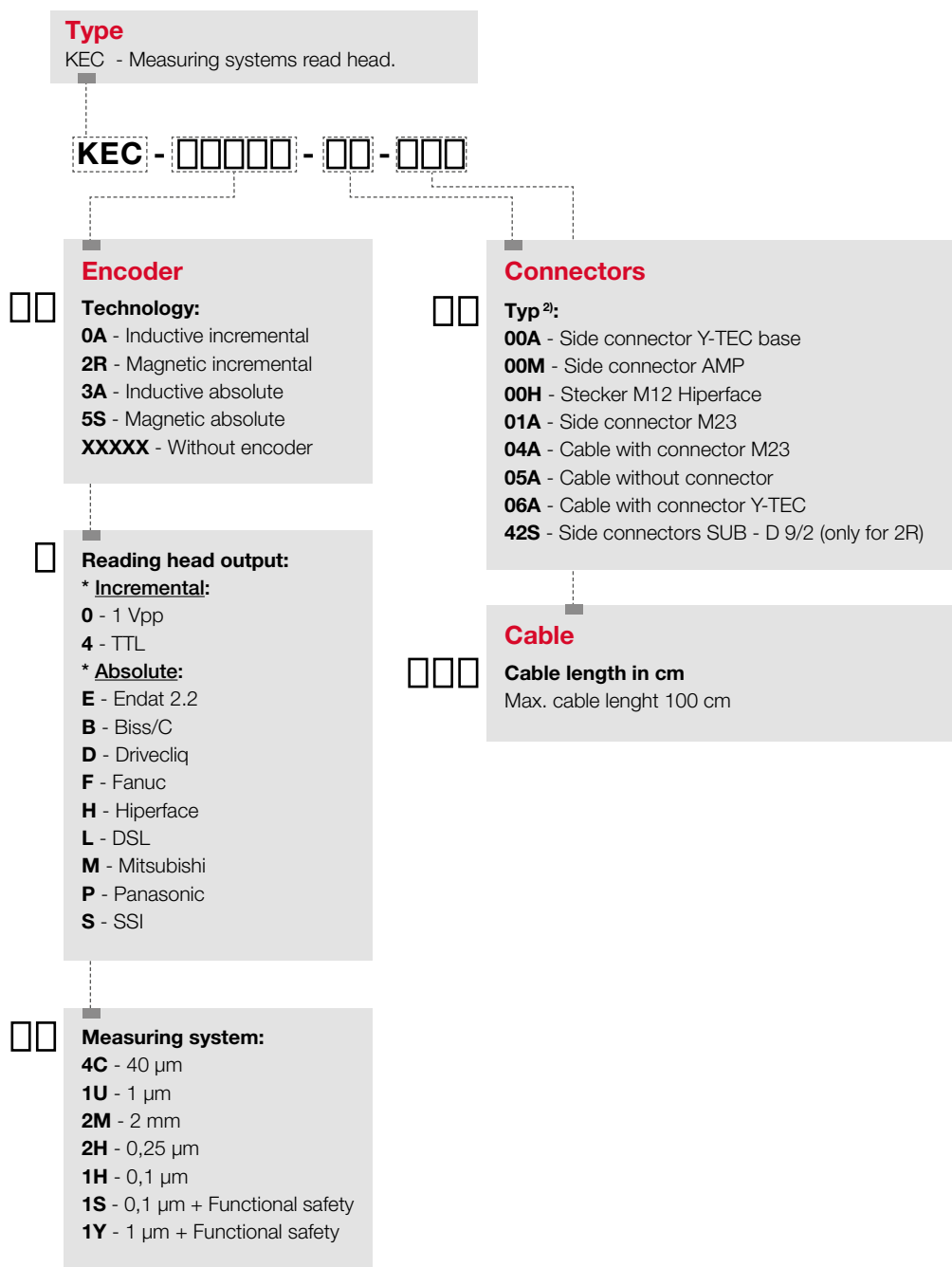


KEC03S - 5S Absolute encoder

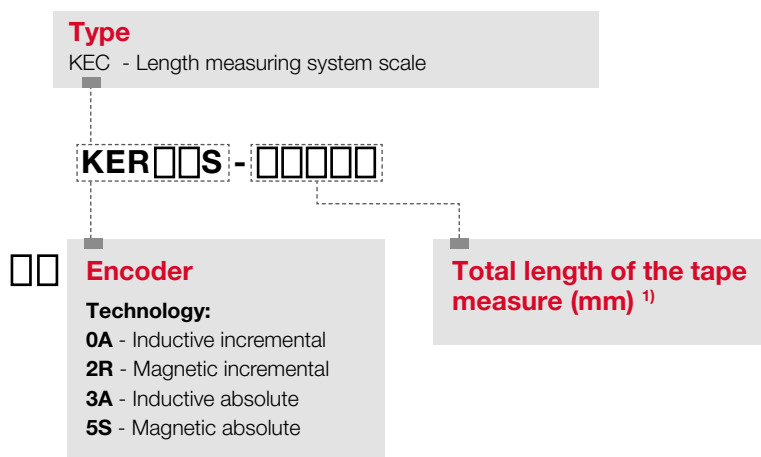
Technical specifications



KEC Encoder Order Code



KER Encoder Order Code

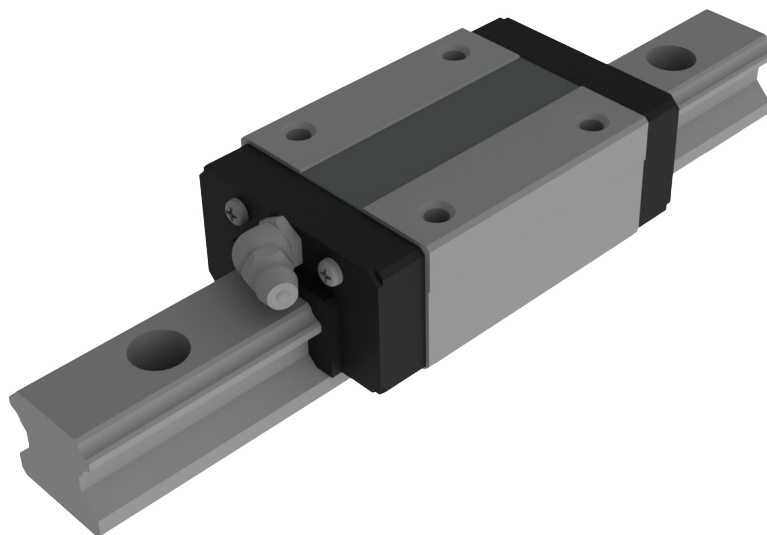


¹⁾ Total length of the tape measure

²⁾ On request

HSV-R Series - Linear guide

Dimensions and specifications

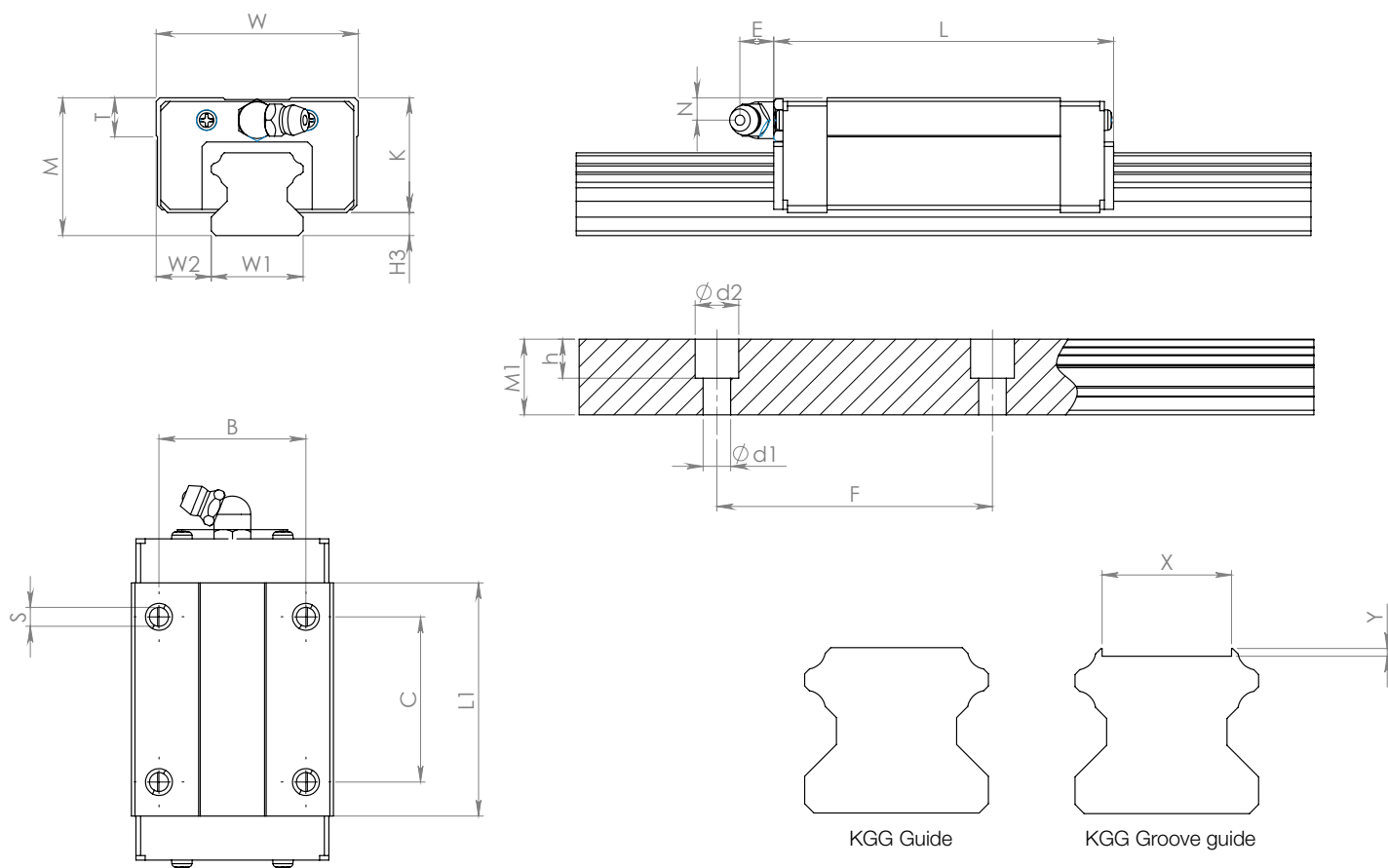


Model	Outer dimensions			Block dimensions									Basic load rating		H ₃
	Height M	Width W	Length L	B	C	Sx∅	L ₁	T	K	N	E	Grease nipple	C [kN]	C ₀ [kN]	
HSV 15R	28	34	56,6	26	26	M4x5	38,8	6	23,8	8,3	5,5	PB102 1B	8,33	13,5	4,2
HSV 20R	30	44	74	32	36	M5x6	50,8	8	25	5	12	B-M6F	13,8	23,8	5
HSV 25R	40	48	83,1	35	35	M6x8	59,5	9	33,5	10	12	B-M6F	19,9	34,4	6,5
HSV 30R	45	60	98	40	40	M8x10	70,4	9	37	10	12	B-M6F	28	46,8	8
HSV 35R	55	70	109,4	50	50	M8x12	80,4	12	45,6	15	12	B-M6F	37,3	71,1	9,4
HSV 45R	70	86	139	60	60	M10x17	98	15	58,5	20	16	B-R1/8	60	95,6	11,5

Model	Rail dimensions						Static permissible moment [kNm] ³					Weight	
	Width W ₁ 0 -0,05	W ₂	Height M ₁	Pitch F	d ₁ x d ₂ x h	Length Max ⁻²	M _A		M _B		M _C	Guide carriage [kg]	Guide rail [kg/m]
							1 Block	2 Block	1 Block	2 Block	1 Block		
HSV 15R	15	9,5	15	60	4,5x7,5x5,3	3000	0,0805	0,457	0,0805	0,457	0,0844	0,18	1,5
HSV 20R	20	12	18	60	6x9,5x8,5	3000	0,19	1,04	0,19	1,04	0,201	0,25	2,3
HSV 25R	23	12,5	22	60	7x11x9	3000	0,307	1,71	0,307	1,71	0,344	0,54	3,3
HSV 30R	28	16	26	80	9x14x12	3000	0,524	2,7	0,524	2,7	0,572	0,9	4,8
HSV 35R	34	18	29	80	9x14x12	3000	0,782	3,93	0,782	3,93	0,905	1,5	6,6
HSV 45R	45	20,5	38	105	14x20x17	3000	1,42	7,92	1,42	7,92	1,83	2,6	11

HSV-R Series - Linear guide

Dimensions and specifications

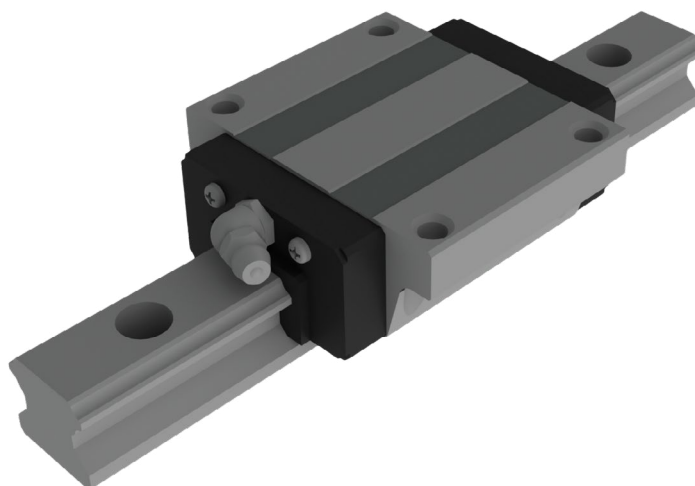


Groove dimensions

SIZE	10x0.85	14x0.85	10x1.65
15	x	-	-
20	x	x	x
25	x	x	x
30	-	x	-
35	-	x	-
45	-	x	-

HSV-C Series - Linear guide

Dimensions and specifications

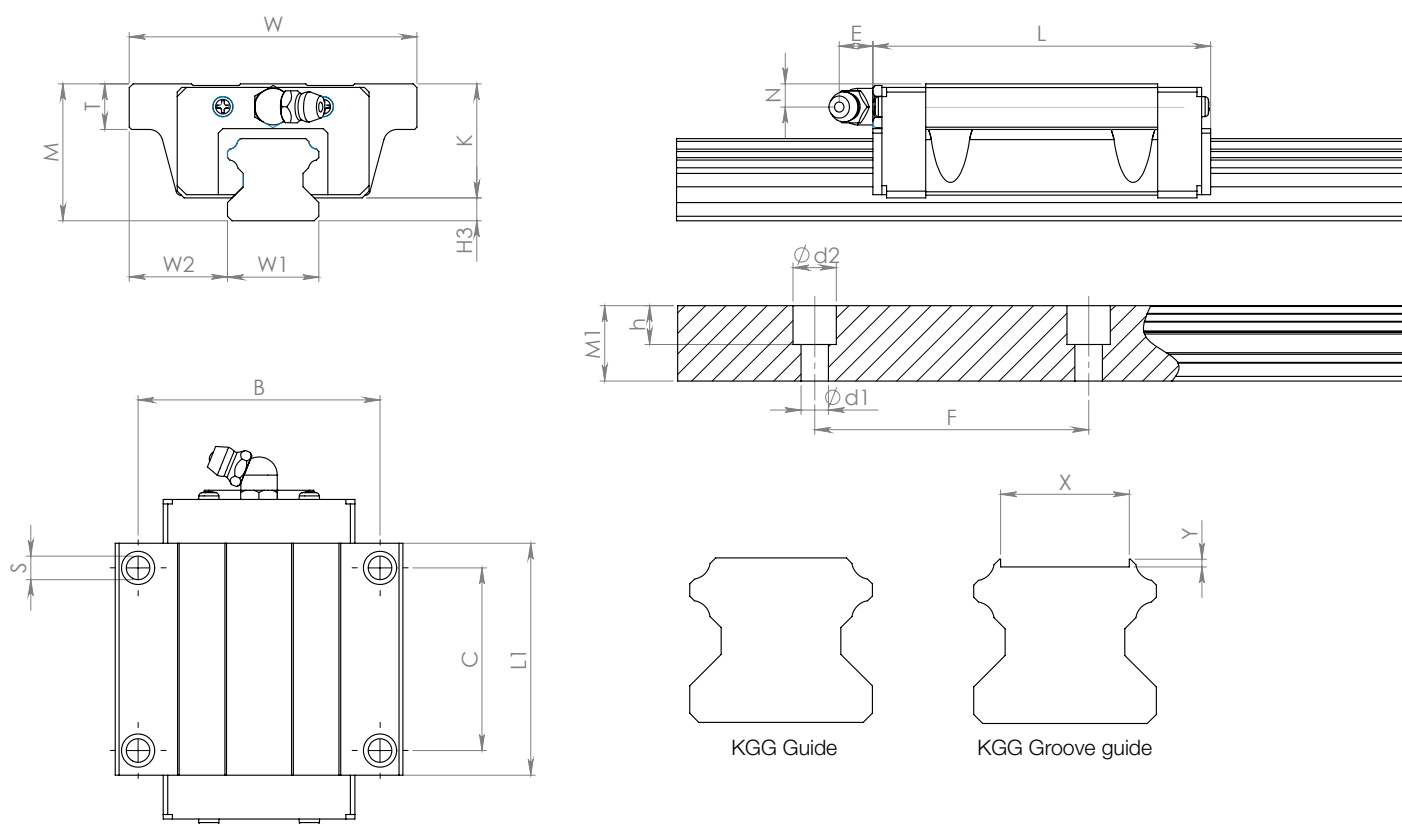


Model	Outer dimensions			Block dimensions									Basic load rating		H ₃
	Height M	Width W	Length L	B	C	S	L ₁	T	K	N	E	Grease nipple	C [kN]	C ₀ [kN]	
HSV 15C	24	47	56,6	26	26	M5	38,8	6	23,8	8,3	5,5	PB1021B	8,33	13,5	4,2
HSV 20C	30	63	74	32	36	M6	50,8	8	25	5	12	B-M6F	13,8	23,8	5
HSV 25C	36	70	83,1	35	35	M8	59,5	9	33,5	10	12	B-M6F	19,9	34,4	6,5
HSV 30C	42	90	98	40	40	M10	70,4	9	37	10	12	B-M6F	28	46,8	8
HSV 35C	48	100	109,4	50	50	M10	80,4	12	45,6	15	12	B-M6F	37,3	71,1	9,4
HSV 45C	60	120	139	60	60	M12	98	15	58,5	20	16	B-R1/8	60	95,6	11,5

Model	Rail dimensions						Static permissible moment [kNm] ³					Weight	
	Width W ₁ 0 -0,05	W ₂	Height M ₁	Pitch F	d ₁ x d ₂ x h	Length Max ²	M _A		M _B		M _C	Guide carriage [kg]	Guide rail [kg/m]
							1 Block	2 Block	1 Block	2 Block	1 Block		
HSV 15C	15	16	13	60	4,5x7,5x5,3	3000	0,175	0,898	0,175	0,898	0,16	0,23	1,3
HSV 20C	20	21,5	16,5	60	6x9,5x8,5	3000	0,334	1,75	0,334	1,75	0,361	0,46	2,3
HSV 25C	23	23,5	20	60	7x11x9	3000	0,566	2,75	0,566	2,75	0,563	0,72	3,2
HSV 30C	28	31	23	80	9x14x12	3000	0,786	4,08	0,786	4,08	0,865	1,34	4,5
HSV 35C	34	33	26	80	9x14x12	3000	1,38	6,76	1,38	6,76	1,53	1,9	6,2
HSV 45C	45	37,5	32	105	14x20x17	3090	2,05	10,1	2,05	10,1	2,68	3,24	10,4

HSV-C Series - Linear guide

Dimensions and specifications

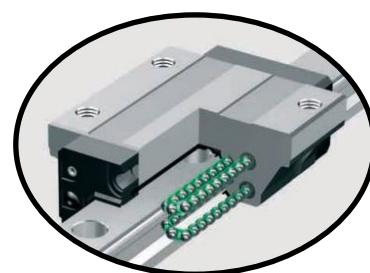
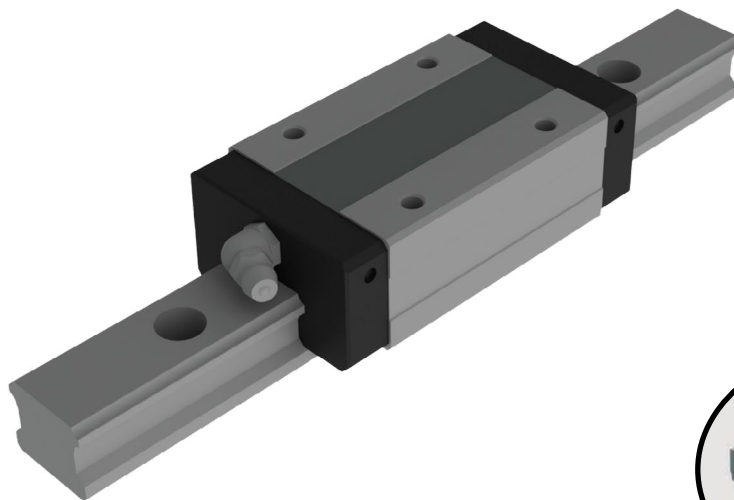


Groove dimensions

SIZE	10x0.85	14x0.85	10x1.65
15	x	-	-
20	x	x	x
25	x	x	x
30	-	x	-
35	-	x	-
45	-	x	-

SHS-V Series - Linear guide

Dimensions and specifications



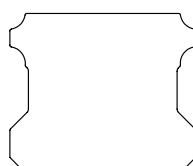
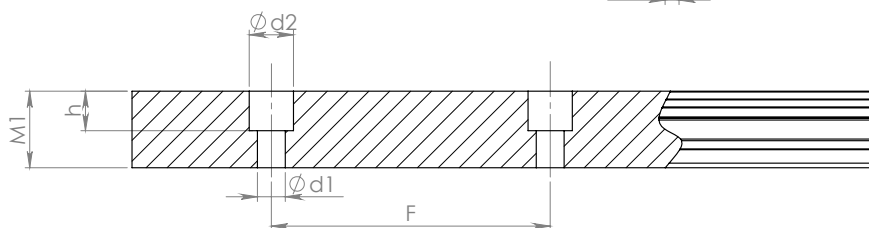
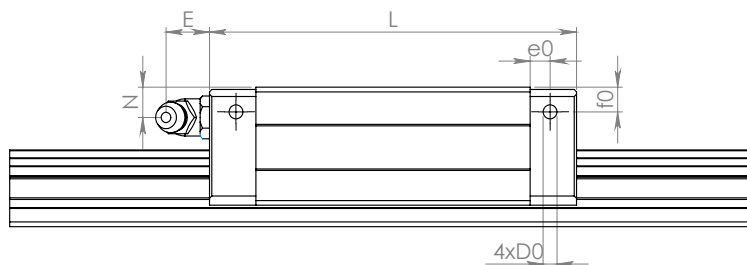
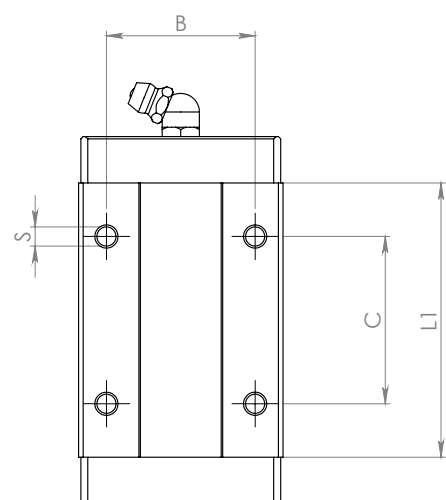
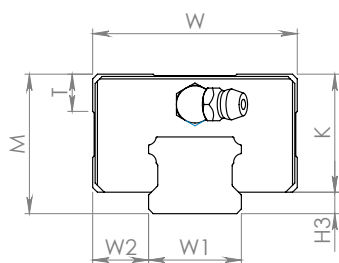
Ball bearing carriage

Model	Outer dimensions			Block dimensions									Pilot hole for side nipple			Basic load rating	
	Height M	Width W	Length L	B	C	Sxℓ	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C [kN]	C ₀ [kN]
SHS 15V	24	34	64,4	26	26	M4x4	48	5,9	21	5,5	5,5	PB1021B	4	4	3	14,2	24,2
SHS 20V	30	44	79	32	36	M5x5	59	8	25,4	6,5	12	B-M6F	4,3	5,3	3	22,3	38,4
SHS 25V	36	48	92	35	35	M6x6,5	71	8	30,2	7,5	12	B-M6F	6	5,5	3	31,7	52,4
SHS 30V	42	60	106	40	40	M8x8	80	8	35	8	12	B-M6F	5,5	6	5,2	44,8	66,6
SHS 35V	48	70	122	50	50	M8x10	93	14,7	40,5	8	12	B-M6F	6,5	5,5	5,2	62,3	96,6
SHS 45V	60	86	140	60	60	M10x15	106	14,9	51,1	10,5	16	B-PT1/8	8	8	5,2	82,8	126

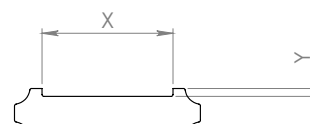
Model	H ₃	Rail dimensions						Static permissible moment [kNm] ⁹					Weight	
		Width W ₁ 0 -0,05	W ₂	Height M ₁	Pitch F	d ₁ x d ₂ x h	Length Max ²	M _A		M _B		M _C	Guide carriage [kg]	Guide rail [kg/m]
								1 Block	2 Block	1 Block	2 Block	1 Block		
SHS 15V	3	15	16	13	60	4,5x7,5x5,3	3000	0,175	0,898	0,175	0,898	0,16	0,23	1,3
SHS 20V	4,6	20	21,5	16,5	60	6x9,5x8,5	3000	0,334	1,75	0,334	1,75	0,361	0,46	2,3
SHS 25V	5,8	23	23,5	20	60	7x11x9	3000	0,566	2,75	0,566	2,75	0,563	0,72	3,2
SHS 30V	7	28	31	23	80	9x14x12	3000	0,786	4,08	0,786	4,08	0,865	1,34	4,5
SHS 35V	7,5	34	33	26	80	9x14x12	3000	1,38	6,76	1,38	6,76	1,53	1,9	6,2
SHS 45V	8,9	45	37,5	32	105	14x20x17	3090	2,05	10,1	2,05	10,1	2,68	3,24	10,4

SHS-V Series - Linear guide

Dimensions and specifications



KGG Guide



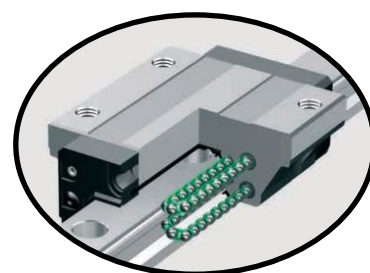
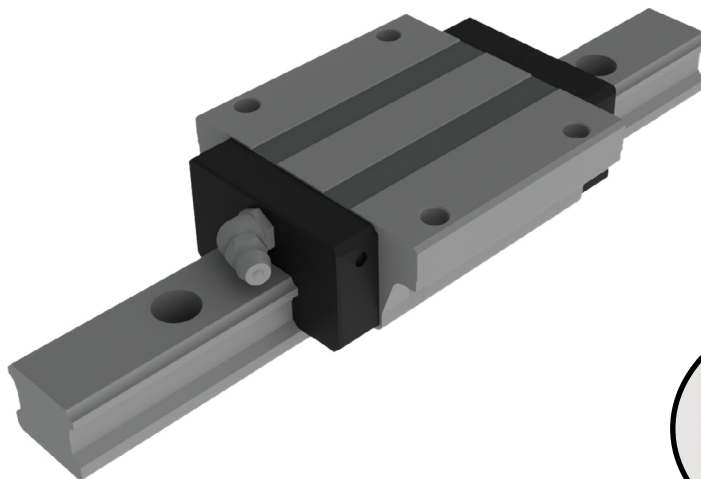
KGG Groove guide

Groove dimensions

SIZE	10x0.85	14x0.85	10x1.65
15	x	-	-
20	x	x	x
25	x	x	x
30	-	x	-
35	-	x	-
45	-	x	-

SHS-C Series - Linear guide

Dimensions and specifications



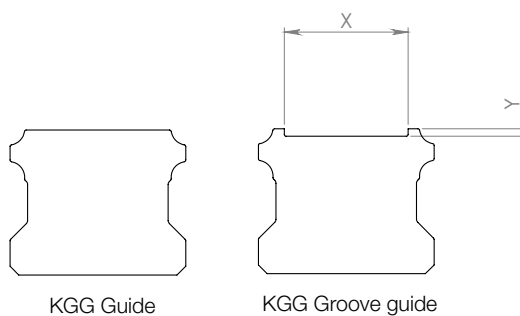
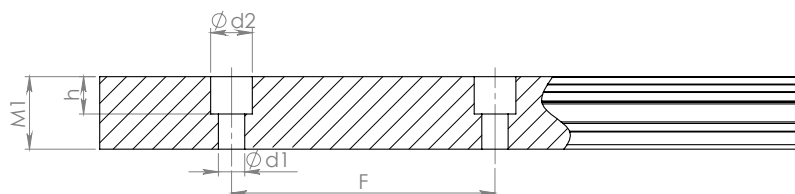
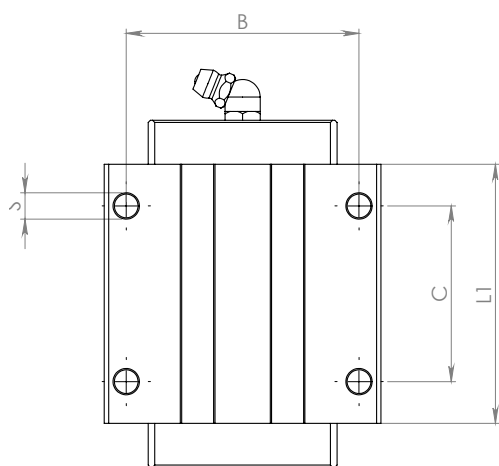
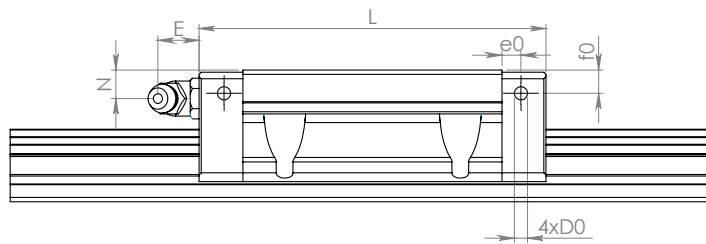
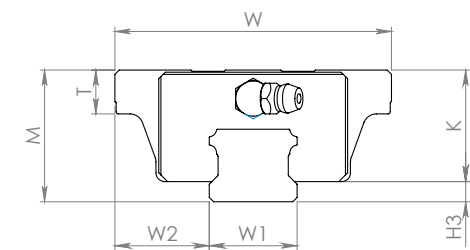
Ball bearing carriage

Model	Outer dimensions			Block dimensions									Pilot hole for side nipple			Basic load rating	
	Height M	Width W	Length L	B	C	S	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C [kN]	C ₀ [kN]
SHS 15C	24	47	64,4	38	26	M5	48	5,9	21	5,5	5,5	PB1021B	4	4	3	14,2	24,2
SHS 20C	30	63	79	53	36	M6	59	8	25,4	6,5	12	B-M6F	4,3	5,3	3	22,3	38,4
SHS 25C	36	70	92	57	35	M8	71	8	30,2	7,5	12	B-M6F	6	5,5	3	31,7	52,4
SHS 30C	42	90	106	62	40	M10	80	8	35	8	12	B-M6F	5,5	6	5,2	44,8	66,6
SHS 35C	48	100	122	82	50	M10	93	14,7	40,5	8	12	B-M6F	6,5	5,5	5,2	62,3	96,6
SHS 45C	60	120	140	100	60	M12	106	14,9	51,1	10,5	16	B-PT1/8	8	8	5,2	82,8	126

Model	H ₃	Rail dimensions						Static permissible moment [kNm] ³					Weight	
		Width W ₁ 0 -0,05	W ₂	Height M ₁	Pitch F	d ₁ x d ₂ x h	Length Max ²	M _A		M _B		M _C	Guide carriage [kg]	Guide rail [kg/m]
								1 Block	2 Block	1 Block	2 Block	1 Block		
SHS 15C	3	15	16	13	60	4,5x7,5x5,3	3000	0,175	0,898	0,175	0,898	0,16	0,23	1,3
SHS 20C	4,6	20	21,5	16,5	60	6x9,5x8,5	3000	0,334	1,75	0,334	1,75	0,361	0,46	2,3
SHS 25C	5,8	23	23,5	20	60	7x11x9	3000	0,566	2,75	0,566	2,75	0,563	0,72	3,2
SHS 30C	7	28	31	23	80	9x14x12	3000	0,786	4,08	0,786	4,08	0,865	1,34	4,5
SHS 35C	7,5	34	33	26	80	9x14x12	3000	1,38	6,76	1,38	6,76	1,53	1,9	6,2
SHS 45C	8,9	45	37,5	32	105	14x20x17	3090	2,05	10,1	2,05	10,1	2,68	3,24	10,4

SHS-C Series - Linear guide

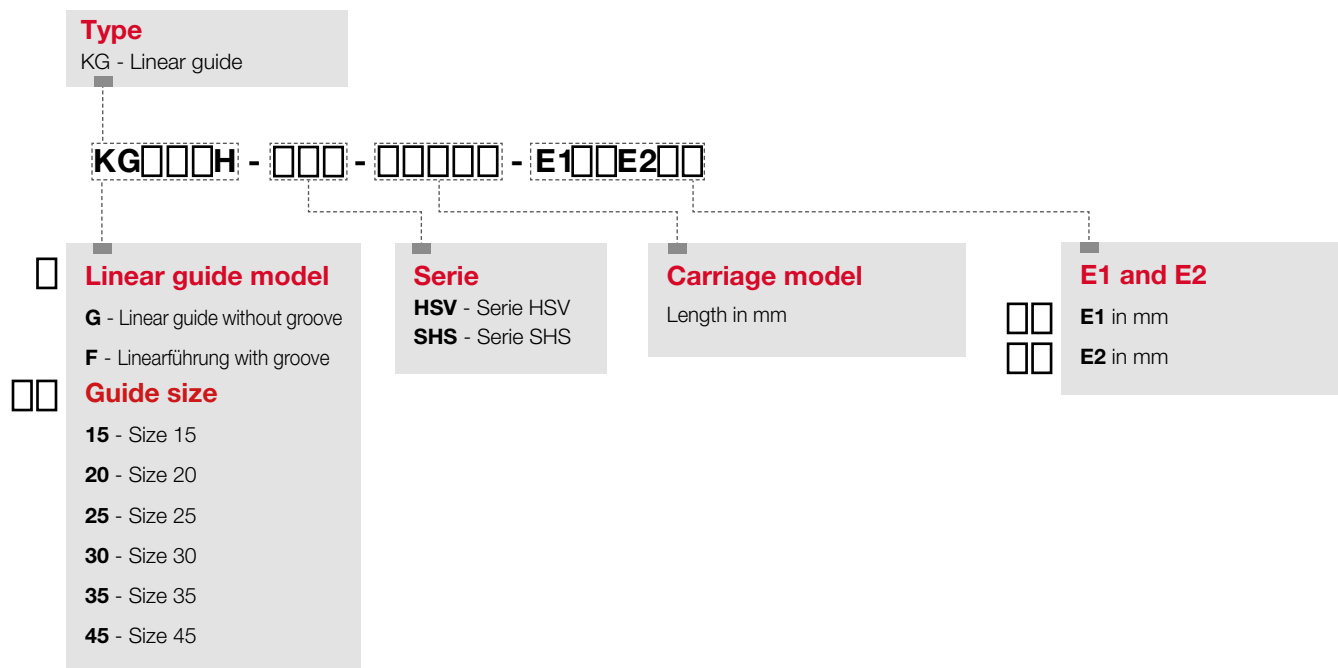
Dimensions and specifications



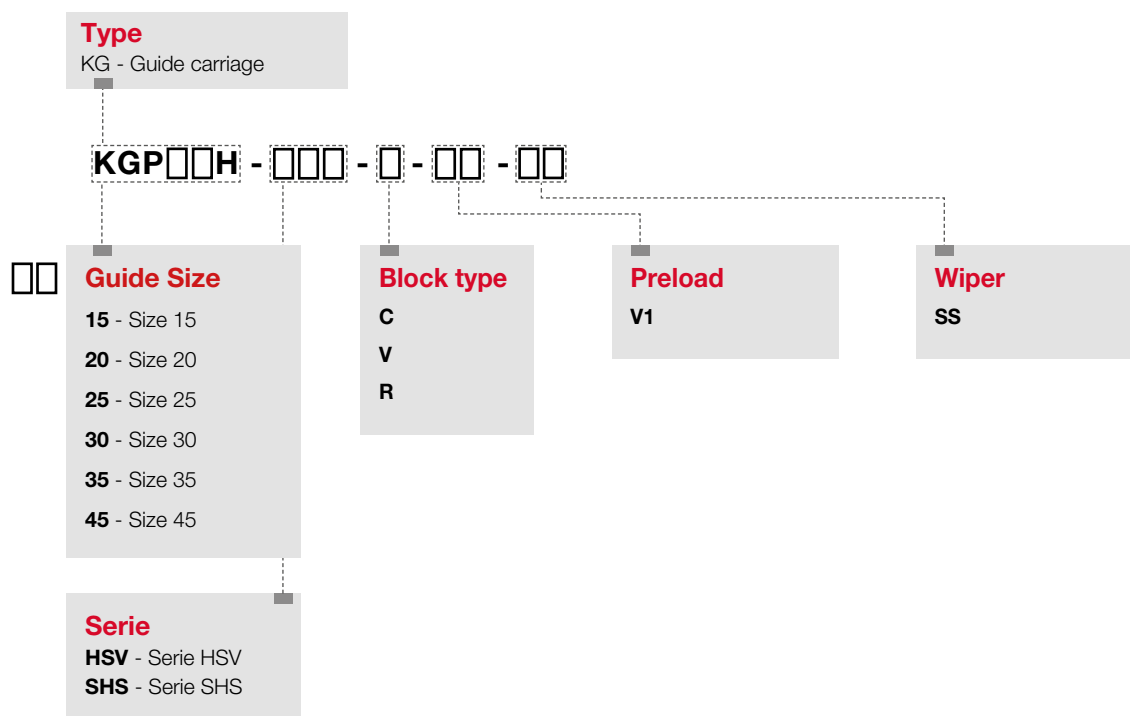
Groove dimensions

SIZE	10x0.85	14x0.85	10x1.65
15	x	-	-
20	x	x	x
25	x	x	x
30	-	x	-
35	-	x	-
45	-	x	-

KGG and KGF Order Code



KGP Order Code



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