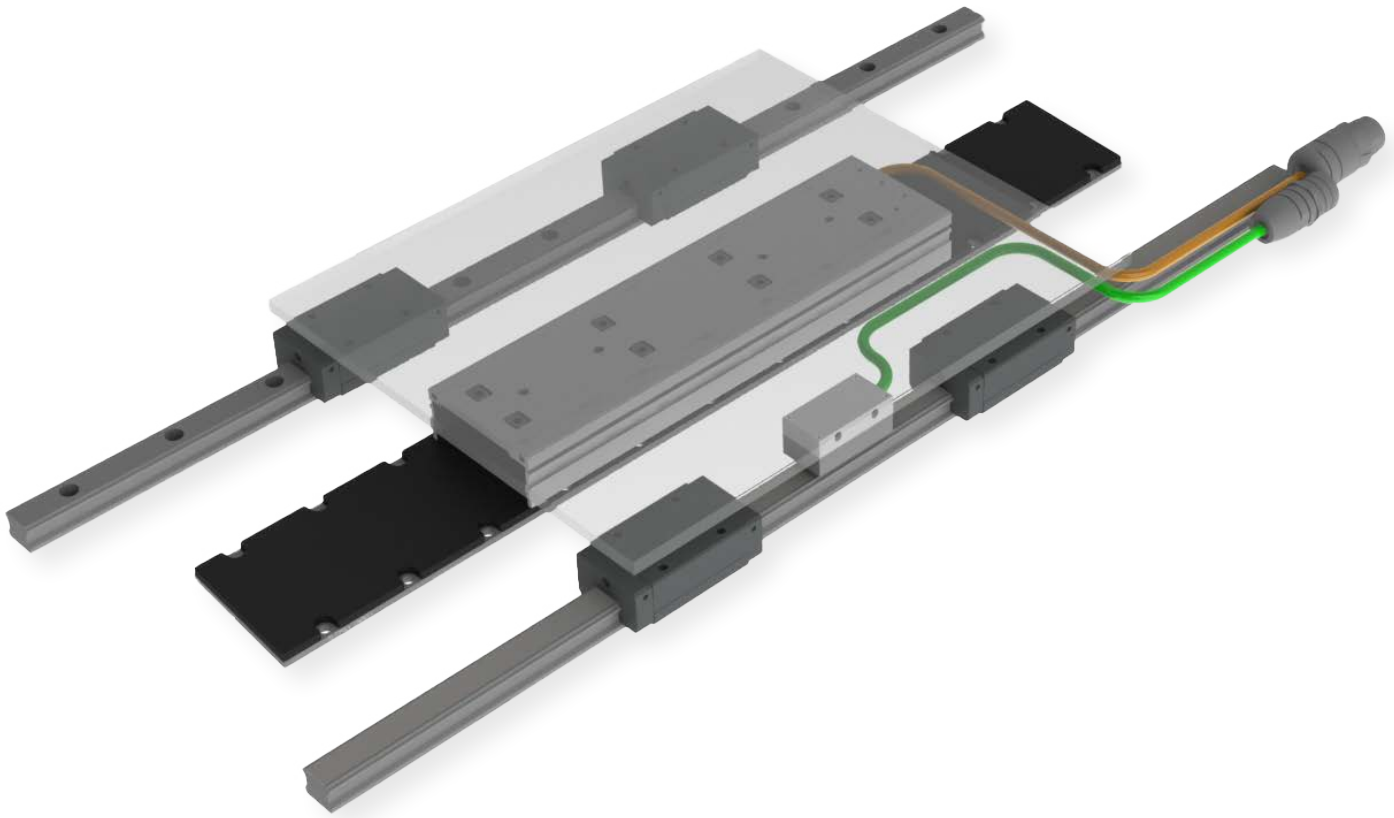
LINEAR
MOTOR KIT

DIRECT DRIVE EXPERTS

03.01.2025



SINADRIVES®
DIRECT DRIVE EXPERTS

Index
Innovation & Excellence

LINEAR MOTOR KIT ADVANTAGES

Advantages of a ready-made linear axis 3

Advantages of a linear motor kit 3

LINEAR MOTOR KIT

IRON CORE LINEAR MOTORS

- KMC71S Series 4
- KMC73S Series 6
- KMC75S Series 8
- KMC77S Series 10
- KMC78S Series 12
- KMC79S Series 14
- KMC80S Series 16

IRONLESS LINEAR MOTORS

- KMC89S Series 18
- KMC90S Series 20
- KMC91S Series 22
- KMC92S Series 24
- KMC93S Series 26
- KMC95S Series 28
- KMC97S Series 30
- KMC98S Series 32
- KMC99S Series 34

LINEAR ENCODERS INTEGRATED INTO THE GUIDE

KEC00S Series - Incremental encoder 38

KEC03S Series - Absolute encoder 40

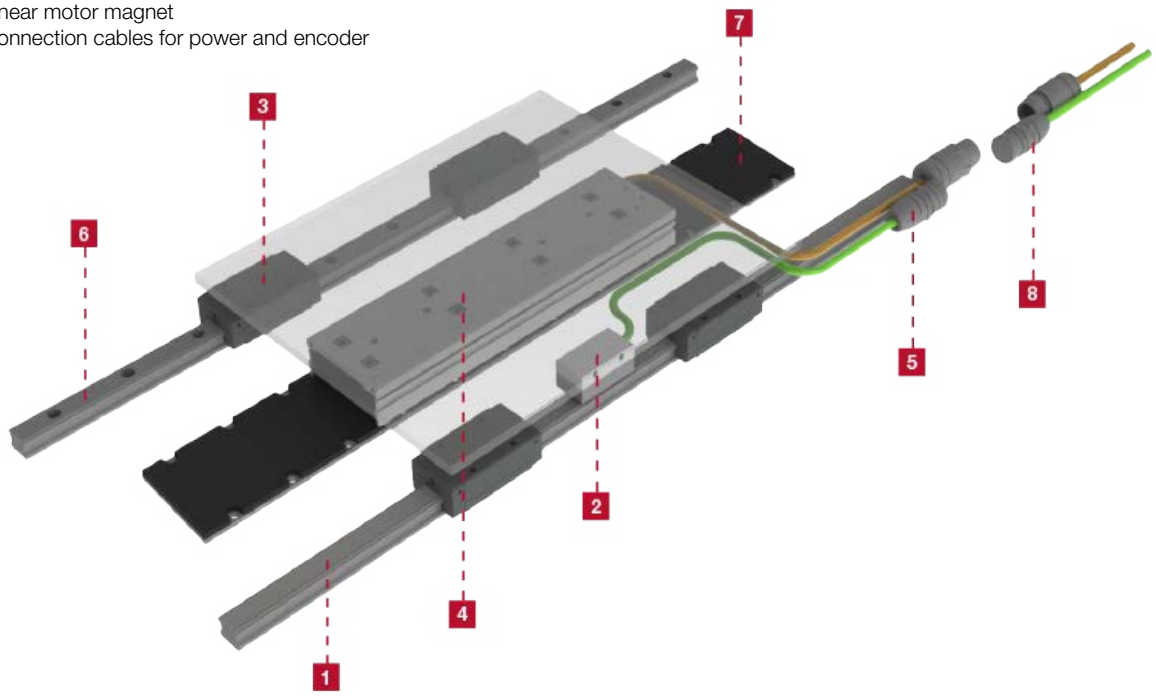
LINEAR GUIDES

KGGxxH Series - Linear Guide HSV 43

KGGxxH Series - Linear Guide SHS 47

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.

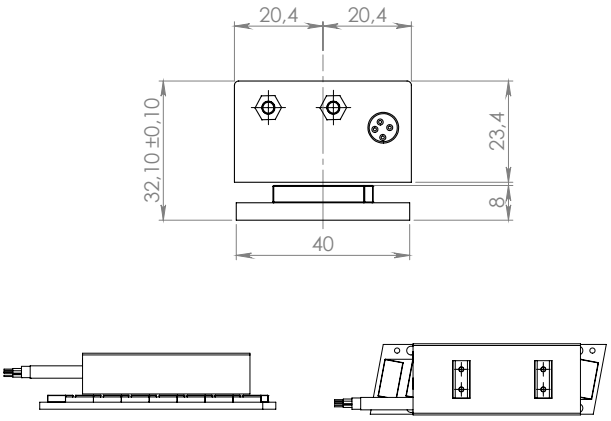
	Parameter	Remarks	Sym	Unit	KMC71S	
Performance	**Winding type**				II01H	II02H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 220V $_{ac\ rms}$ (320V$_{dc}$)	
	Ultimate force @ 10°C/s increase	Magnet @ 25ºC	F_u	N	110	220
	Peak force @ 6°C/s increase	Magnet @ 25ºC	F_p	N	95	190
	Continuous force*	Coils @ 110ºC	F_c	N	45	90
	Maximum speed**	@ 320 V	V_{max}	m/s	6	6
	Motor force constant	Mount. sfc. @ 20ºC	K	N/A_{rms}	30	30
	Motor constant	Coils @ 25ºC	S	N²/W	40	80
Electrical	**Ultimate current**	Magnet @ 25ºC	I_u	A_{rms}	5	9,9
	Peak current	Magnet @ 25ºC	i_p	A_{rms}	3.7	7,3
	Maximum continuous current*	Coils @ 110ºC	I_c	A_{rms}	1.5	3,0
	Back EMF Phase-Phase$_{peak}$		B_{emf}	V/m/s	24	24
	Resistance per phase	Coils @ 25ºC ex. cable	R_{ph}	Ω	5	2,5
	Induction per phase	I < 0.6 Ip	I_{ph}	mH	30	15
	Electrical time constant	Coils @ 25ºC	T_e	ms	6	
Thermal	**Max. continuous power loss**	All coils	P_c	W	66	132
	Thermal resistance	Coils to mount. sfc.	R_{th}	ºC/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.*

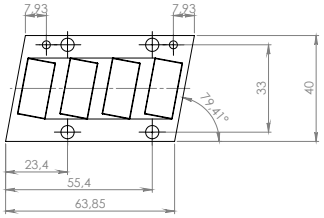
KMC71S SERIES - IRON CORE LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

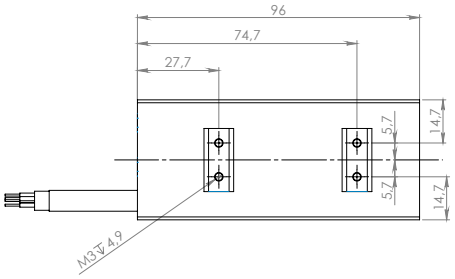
MAGNET PLATES



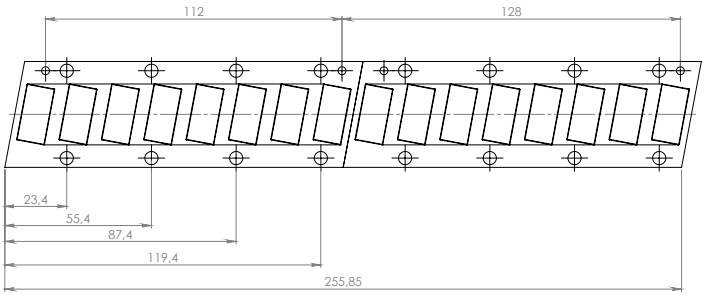
KMM710064



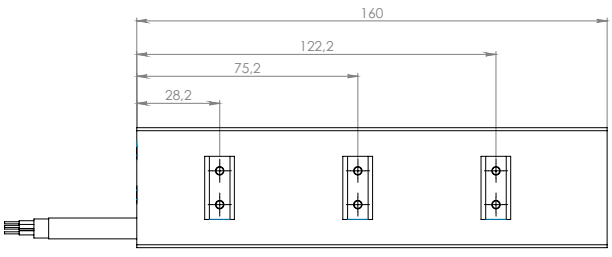
KMC71S-II01H



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.

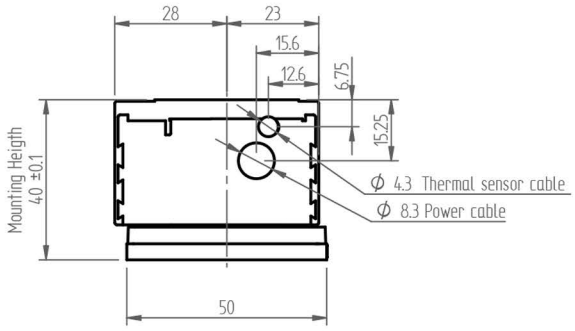
	Parameter	Remarks	Sym	Unit	KMC73S									
Performance	**Winding type**				II01H	II01I	II02H	II02I	II05H	II05I	II07N	II07H	II07I	II09N
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 400 $V_{ac\ rms}$ (max. 900 V_{dc})									
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F_u	N	135		270		540		810			960
	Peak force @ 6°C/s increase	Magnet @ 25°C	F_p	N	116		232		464		696			840
	Continuous force*	Coils @ 100°C	F_c	N	60		120		240		360			480
	Maximum speed**	@ 560 V_{dc}	V_{max}	m/s	12	36	12	36	12	36	4,5	10,0	36	3.8
	Motor force constant	Mount. sfc. @ 20°C	K	N/A_{rms}	39	12,9	39	12,9	39	12,9	79	39	12,9	103
	Motor constant	Coils @ 25°C	S	N^2/W	95		190		380		570			760
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	12.6
	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	9.5
	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	4.7
	Back EMF Phase-Phase$_{peak}$		B_{emf}	V/m/s	32	11	32	11	32	11	65	32	11	84
	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	4.5
	Induction per phase	I < 0.6 Ip	I_{ph}	mH	35	3,75	17	1,83	9	0,9	23	5,5	2,6	29
	Electrical time constant	Coils @ 25°C	T_e	ms	6,5									
Thermal	**Max. continuous power loss**	All coils	P_c	W	49		99		197		296			394
	Thermal resistance	Coils to mount. sfc.	R_{th}	°C/W	1,5		0,75		0,38		0,25			0.19
	Thermal time constant*	up to 63% max. coiltemp.	T_{th}	s	75									
	Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122									
Mechanical	**Coil unit weight**	ex. cables	W	kg	0,6		0,9		1,6		2,3			3.0
	Coil unit length	ex. cables	L	mm	93		143	93	241		336			434
	Motor attraction force	rms @ 0 A	F_a	N	300		500		900		1300			1700
	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									

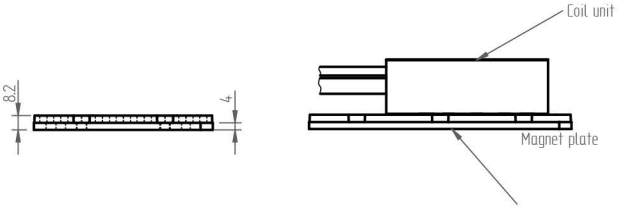
** These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.*
*** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.*
**** Depending on bending radius, velocity and acceleration.*

KMC73S SERIES - IRON CORE LINEAR MOTOR

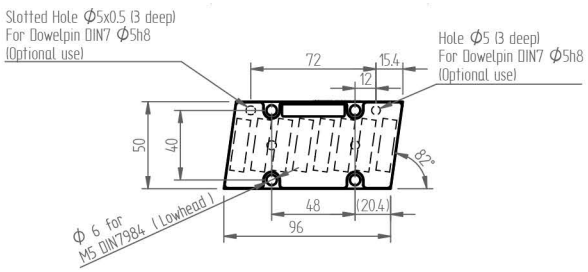
DIMENSIONS AND SPECIFICATIONS

MAGNET PLATES

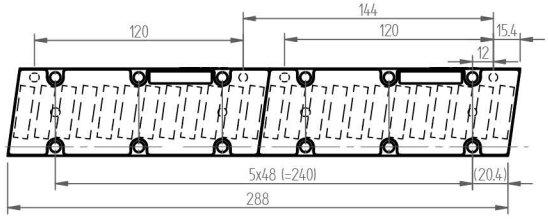




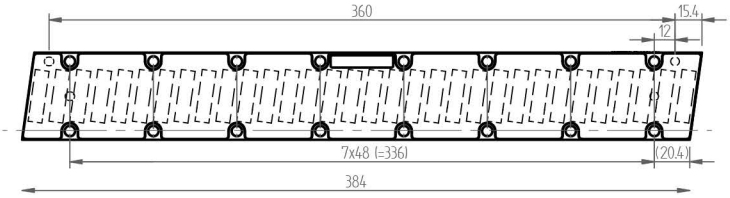
KMM730096



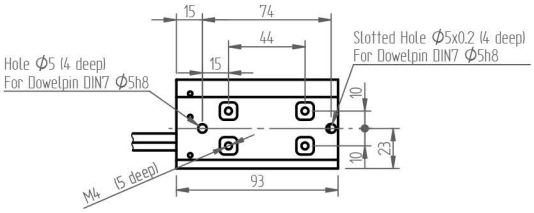
KMM730144



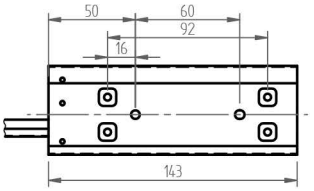
KMM730384



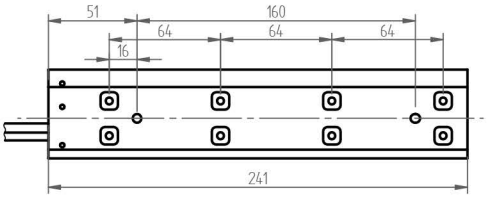
KMC73S-II01H



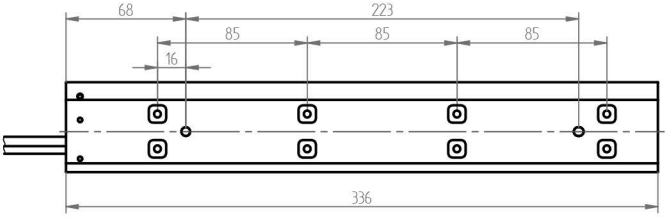
KMC73S-II02H



KMC73S-II05H



KMC73S-II07H / II07N / II07I



*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.		

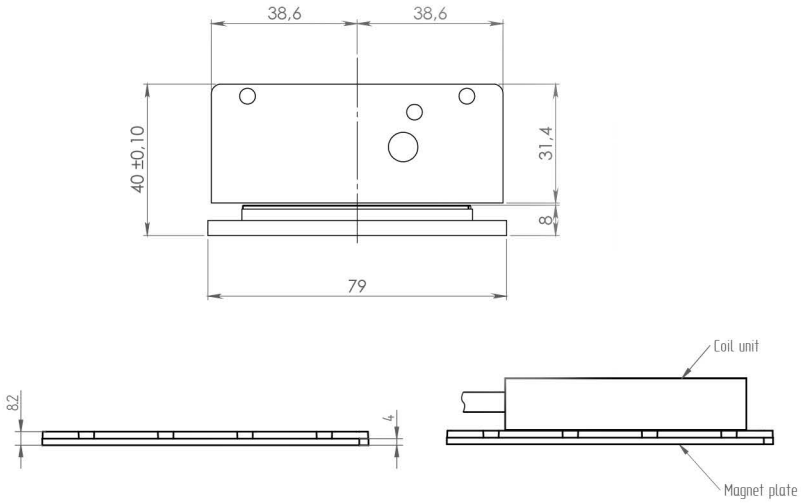
	Parameter	Remarks	Sym	Unit	KMC75S														
Performance	**Winding type**				II04N	II04H	II06N	II06H	II09N	II09H	II11N	II11H	II13N	II13H	II18N	II18H	II25N	II25H	II36Q
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 400 $V_{ac\ rms}$ (max. 900 V_{dc})														
	Ultimate force @ 10°C/s increase	Magnet @ 25ºC	F_u	N	496		744		992		1240		1488		1984		2480		3600
	Peak force @ 6°C/s increase	Magnet @ 25ºC	F_p	N	440		660		890		1100		1320		1760		2200		3200
	Continuous force aircooled*	Coils @ 100ºC	F_c	N	200		300		400		500		600		800		1100		1680
	Maximum speed**	@ 560 V_{dc}	V_{max}	m/s	3.5	7	2.5	7	3.5	7	3.5	7	3.5	7	3.5	7	4	8	1.7
	Motor force constant	Mount. sfc. @ 20ºC	K	N/A_{rms}	93	46.5	140	46.5	93	46.5	112	46.5	93	44.9	93	46.5	112.5	46.5	180
	Motor constant	Coils @ 25ºC	S	N^2/W	380		570		760		950		1140		1520		1900		3040
Electrical	**Ultimate current**	Magnet @ 25ºC	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	29.8	72.1	27.1
	Peak current	Magnet @ 25ºC	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	22.7	55.0	20.7
	Continuous current watercooled*	Coils @ 100ºC	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	9.8	23.7	9.4
	Back EMF Phase-Phase$_{peak}$		B_{emf}	V/m/s	76	38	114	38	76	38	92	38	76	38	76	38	92	38	147
	Resistance per phase	Coils @ 25ºC 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	2.17	0.37	3.45
	Induction per phase	I < 0.6 Ip	L_{ph}	mH	54.0	14.0	81.0	9.0	27.0	7.0	32.0	5.4	18.0	4.4	14	3.4	16.3	2.8	25.9
	Electrical time constant	Coils @ 25ºC	t_e	ms	7.5														
Thermal	**Max. continuous power loss**	All coils	P_c	W	150		225		300		375		450		600		853		1200
	Thermal resistance	Coils to mount. sfc.	R_{th}	ºC/W	0.48		0.32		0.24		0.19		0.16		0.12		0.1		0.06
	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		3.2		5.7
	Watercooling pressure-drop	Order of magnitude	ΔP_w	bar	1		1		2		2		2		3		3		7
	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		6		9.75
	Coil unit length	ex. cables	L	mm	146		194		244		290		336		468		562		855
	Motor attraction force	rms @ 0 A	F_a	N	950		1325		1700		2075		2450		3400		4150		6400
	Magnet pitch NN		t	mm	24														
	Cable mass		m	kg/m	0.18														
	Cable Type (power FLEX)***	Length 3 m	d	mm (AWG)	7.4 (18)										11.9 (14)				
	Cable Type (sensor)	Length 3 m	d	mm (AWG)	4.3 (26)														
	Cable Life Time (power FLEX)***	Minimum		Cycles	5.000.000 cycles														
	Bending Radius Static	Minimum		mm	4x cable diameter														
	Bending Radius Dynamic	Minimum		mm	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.*

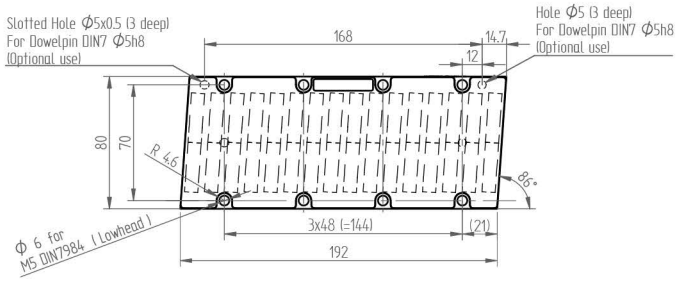
KMC75S SERIES - IRON CORE LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

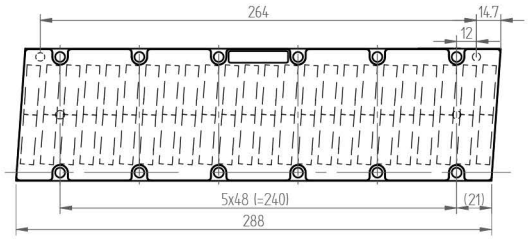
MAGNET PLATES



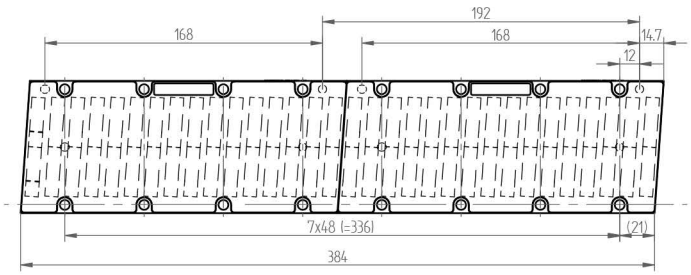
KMM750192



KMM750288

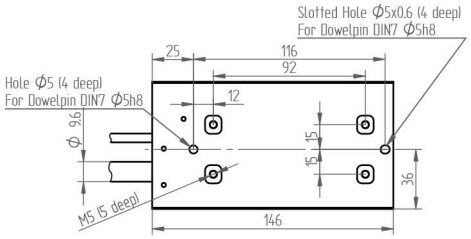


KMM750192 x 2

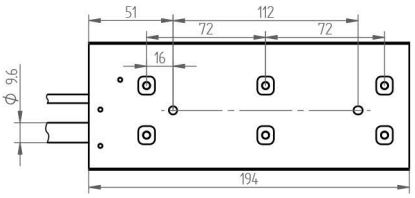


Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
** All sizes are in mm*

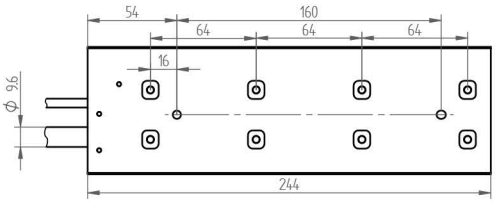
KMC75S-II04N / II04H



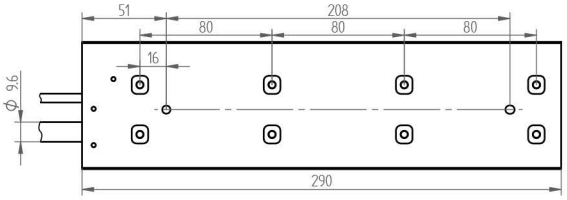
KMC75S-II06N / II06H



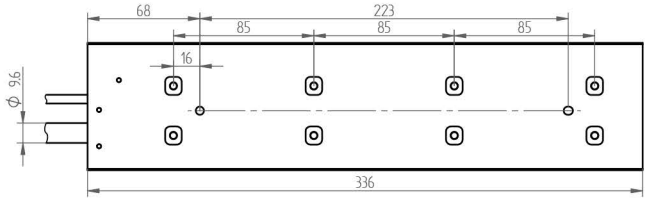
KMC75S-II09N / II09H



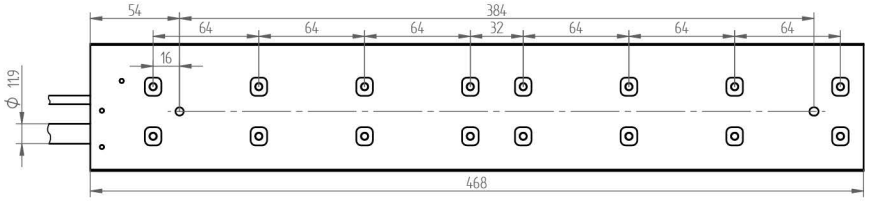
KMC75S-II11N / II11H



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	
Magnet plates can be butted together.		

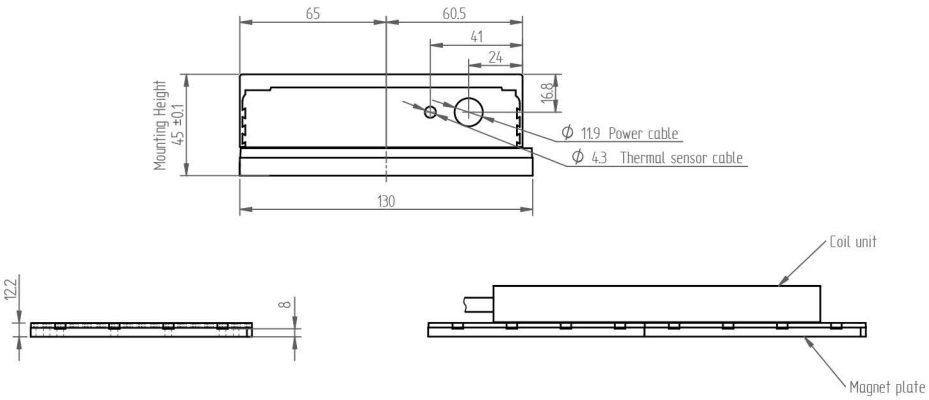
	Parameter	Remarks	Sym	Unit	KMC77S											
	Winding type				II18N	II18H	II22N	II22H	II28N	II28H	II38N	II38H	II47N	II47H	II71N	II71H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 400 $V_{ac\ rms}$ (max. 900 V_{dc})											
Performance	**Ultimate force @ 10°C/s increase**	Magnet @ 25ºC	F_u	N	1900		2375		2850		3800		4750		7125	
Performance	**Peak force @ 6°C/s increase**	Magnet @ 25ºC	F_p	N	1680		2100		2520		3360		4200		6300	
Performance	**Continuous force***	Coils @ 100ºC	F_c	N	760		950		1200		1600		2000		3000	
Performance	**Maximum speed****	@ 560 V_{dc}	V_{max}	m/s	3	6	2.5	6	3	6	3	6	3	6	3	6
Performance	**Motor force constant**	Mount. sfc. @ 20ºC	K	N/A_{rms}	186	93	225	93	186	89.9	186	93	224.5	93	224.5	93
Performance	**Motor constant**	Coils @ 25ºC	S	N^2/W	1750		2150		2640		3520		4400		6600	
Electrical	**Ultimate current**	Magnet @ 25ºC	I_u	A_{rms}	13.0	26	13.5	33	21	43	28	56	29	69	43	104
Electrical	**Peak current**	Magnet @ 25ºC	i_p	A_{rms}	10	20	10	25	16	33	21	42	22	53	33	79
Electrical	**Maximum continuous current***	Coils @ 100ºC	I_c	A_{rms}	4.1	8.2	4.2	10.2	6	13	9	18	9	22	13	32
Electrical	**Back EMF Phase-Phase$_{peak}$**		B_{emf}	V/m/s	152	76	183	76	152	73	152	76	183	76	183	76
Electrical	**Resistance per phase**	Coils @ 25ºC ex. cable	R_{ph}	Ω	6.3	1.6	7.6	1.3	4.24	1.02	3.2	0.8	3.78	0.64	253	0.43
Electrical	**Induction per phase**	I < 0.6 Ip	I_{ph}	mH	51	13	60	10	34	8	25.4	6.4	30	5	20	3
Electrical	**Electrical time constant**	Coils @ 25ºC	T_e	ms	8											
Thermal	**Max. continuous power loss**	All coils	P_c	W	430		530		731		853		1218		1827	
Thermal	**Thermal resistance**	Coils to mount. sfc.	R_{th}	ºC/W	0.15		0.12		0.11		0.08		0.07		0.04	
Thermal	**Thermal time constant***	up to 63% max. coiltemp.	T_{th}	s	90											
Thermal	**Temperature cut-off / sensor**				PTC 1kΩ / KTY 83-122											
Mechanical	**Coil unit weight**	ex. cables	W	kg	4.9		5.9		6.5		9		11		16.5	
Mechanical	**Coil unit length**	ex. cables	L	mm	248		290		336		468		562		834	
Mechanical	**Motor attraction force**	rms @ 0 A	F_a	N	3400		4150		4900		6800		8300		12450	
Mechanical	**Magnet pitch NN**		t	mm	24											
Mechanical	**Cable Type (power FLEX)********	Length 3 m	d	mm (AWG)	8.4 (16)						10.1 (14)				12.1 (6)	
Mechanical	**Cable Type (sensor)**	Length 3 m	d	mm (AWG)	4.3 (26)											
Mechanical	**Cable Life Time (power FLEX)*****	Minimum		Cycles	5.000.000 cycles											3.5m
Mechanical	**Bending Radius Static**	Minimum		mm	4x cable diameter											4x
Mechanical	**Bending Radius Dynamic**	Minimum		mm	7.5x cable diameter											10x

** 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.*

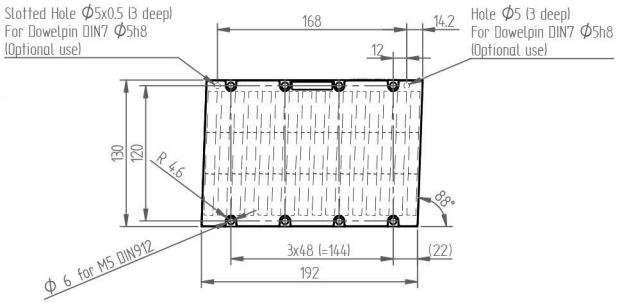
KMC77S SERIES - IRON CORE LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

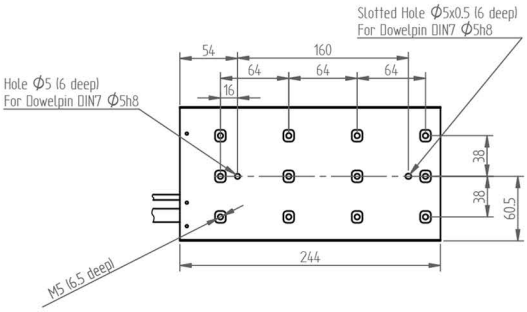
MAGNET PLATES



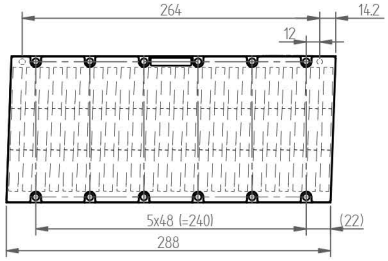
KMM770192



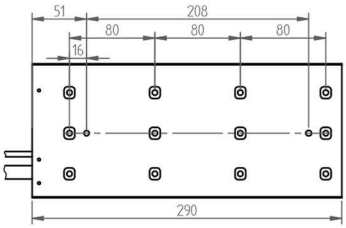
KMC77S-II18N / II18H



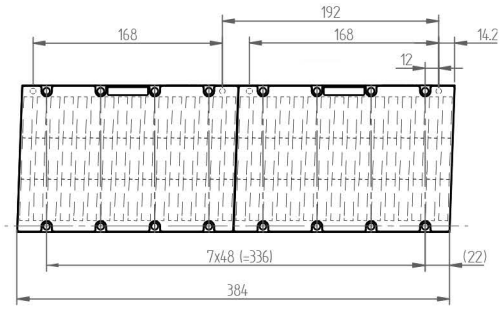
KMM770288



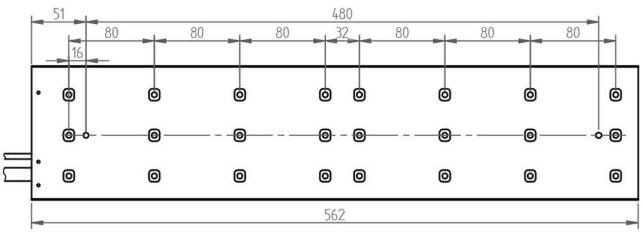
KMC77S-II22N / II22H



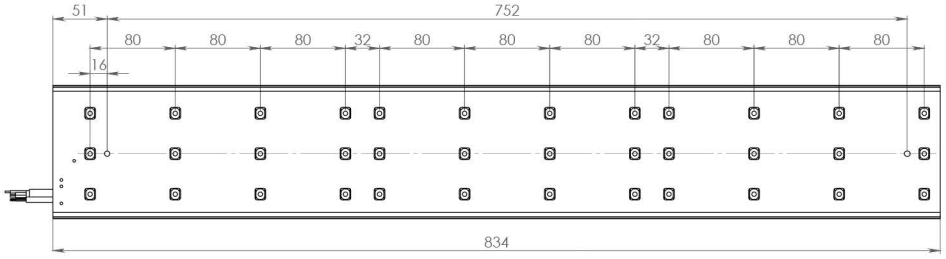
KMM770192 x 2



KMC77S-II45N / II45H



KMC77S-II71N / II71H



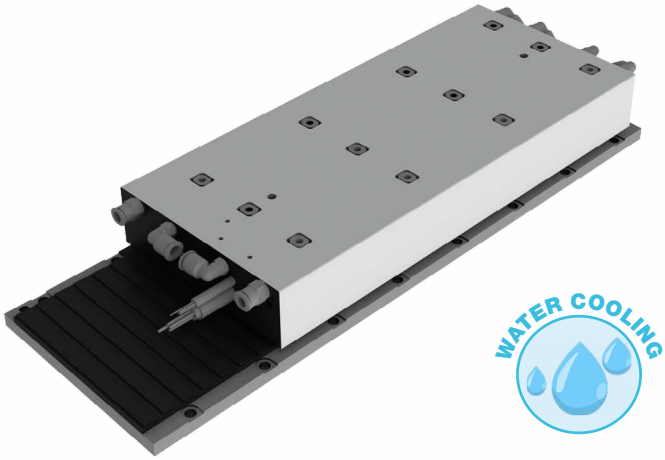
Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
** All sizes are in mm*

KMC78S SERIES - IRON CORE LINEAR MOTOR
DIMENSIONS AND SPECIFICATIONS

Magnet plate dimensions		
Code	**KMM770192**	**KMM770288**
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.



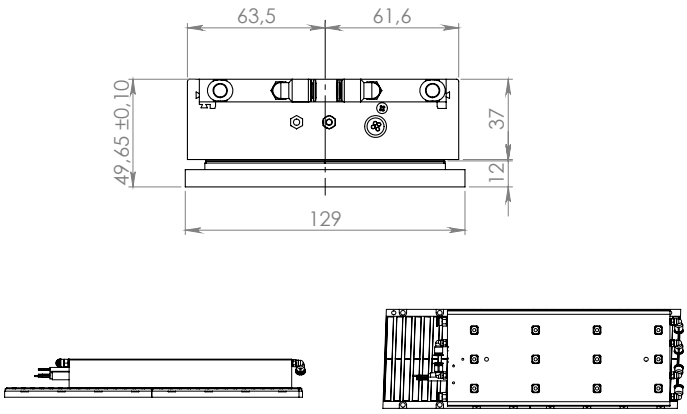
	Parameter	Remarks	Sym	Unit	KMC78S							
Performance	**Winding type**				II23N	II23H	II28N	II28H	II47N	II47H	II71N	II71H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 400 $V_{ac\ rms}$ (V_{dc})							
	Ultimate force @ 10°C/s increase	Magnet @ 25ºC	F_u	N	2375		2850		4750		7125	
	Peak force @ 6°C/s increase	Magnet @ 25ºC	F_p	N	2100		2520		4200		6300	
	Continuous force watercooled**	Coils @ 100ºC	F_{cw}	N	1300		1560		2600		3900	
	Continuous force aircooled*	Coils @ 100ºC	F_c	N	955		1140		1900		2850	
	Maximum speed**	@ 560 V	V_{max}	m/s	3	6	3	6	2.5	6	2.5	6
	Motor force constant	Mount. sfc. @ 20ºC	K	N/A_{rms}	224.5	93	186	90	225	93	225	93
	Motor constant	Coils @ 25ºC	S	N^2/W	2200	2200	2640		4400		6600	
Electrical	**Ultimate current**	Magnet @ 25ºC	I_u	A_{rms}	14	35	21	43	29	69	43	104
	Peak current	Magnet @ 25ºC	i_p	A_{rms}	11	26	16	33	22	53	33	79
	Maximum continuous current*	Coils @ 100ºC	I_c	A_{rms}	4	11	8	17	12	28	17	42
	Back EMF Phase-Phase$_{peak}$		B_{emf}	V/m/s	183	76	152	76	183	76	183	76
	Resistance per phase	Coils @ 25ºC ex. cable	R_{ph}	Ω	7.55	1.27	4.4	1.0	3.9	0.66	2.6	0.44
	Induction per phase	I < 0.6 Ip	I_{ph}	mH	60	10	35	8	31	5	21	3
	Electrical time constant	Coils @ 25ºC	T_e	ms	8							
Thermal	**Max. continuous power loss**	All coils	P_c	W	487		726		1209		1804	
	Thermal resistance	Coils to mount. sfc.	R_{th}	ºC/W	0.13		0.10		0.06		0.04	
	Thermal time constant*	up to 63% max. coiltemp.	T_{th}	s	87							
	Watercooling flow	for ΔT=3K	Ow	l/min	3		3.4		5.6		8.4	
	Watercooling pressure-drop	Magnitude	ΔP_w	bar	1		1.0		1.5		2.5	
	Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122							
Mechanical	**Coil unit weight**	ex. cables	W	kg	6		7.3		12.3		18.2	
	Coil unit length	ex. cables	L	mm	290		336		562		834	
	Motor attraction force	rms @ 0 A	F_a	N	4150		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.*

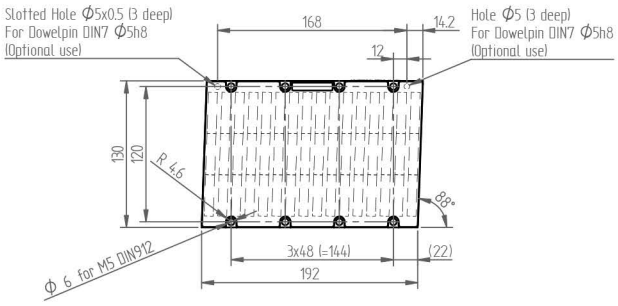
KMC78S SERIES - IRON CORE LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

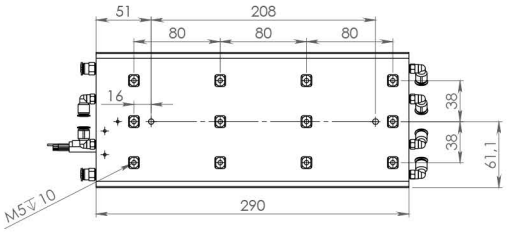
MAGNET PLATES



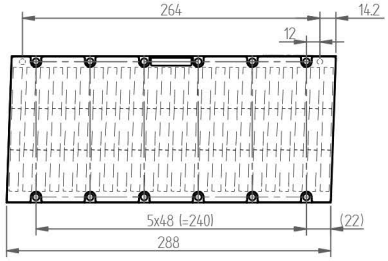
KMM770192



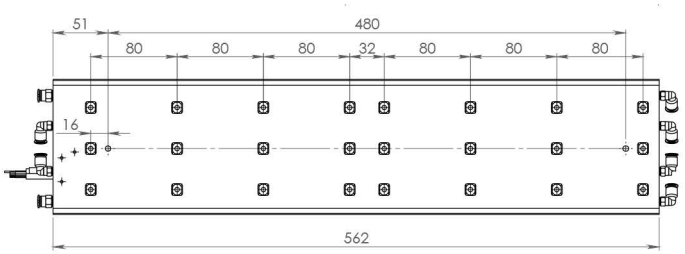
KMC78S-II23N / II23H



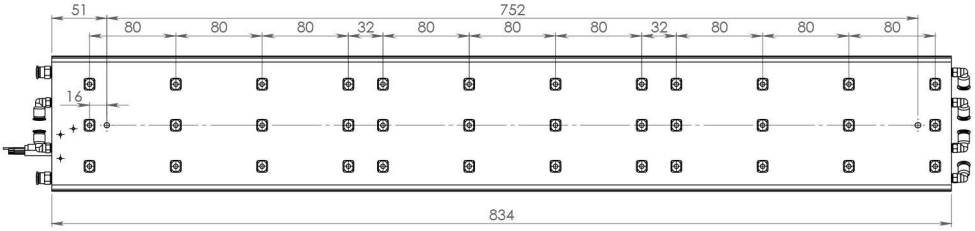
KMM770288



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*

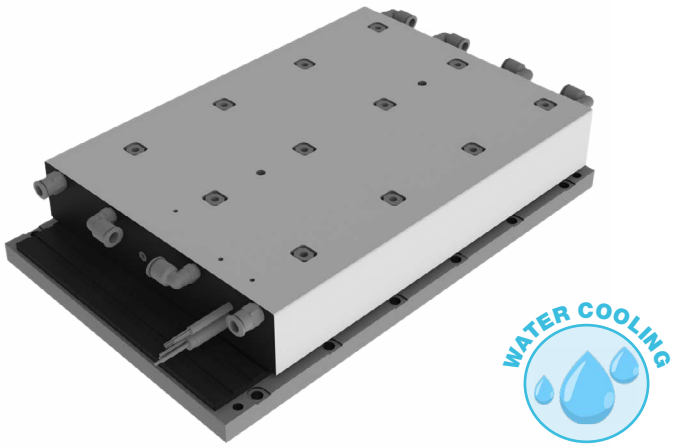
KMC79S SERIES - IRON CORE LINEAR MOTOR

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.



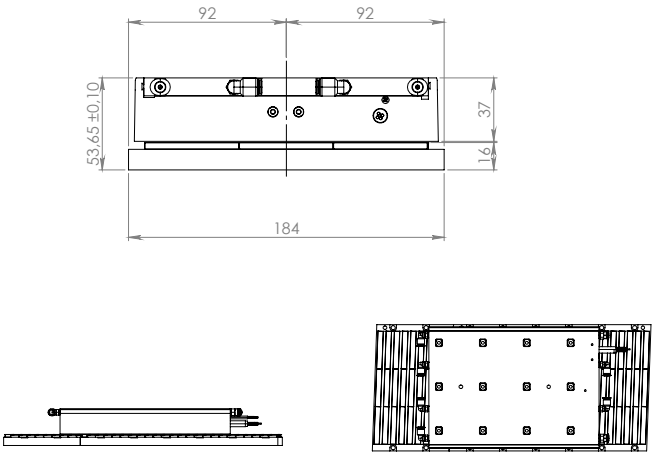
	Parameter	Remarks	Sym	Unit	KMC79S											
Performance	**Winding type**				II27N	II27H	II34N	II34H	II41N	II41H	II54N	II54H	II68N	II68H	II10N	II10H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 380 $V_{ac\ rms}$ (600V_{dc})											
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F_u	N	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	
	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	13.5	336	139.5	336	139.5
	Motor constant	Coils @ 25°C	S	N^2/W	2864		3580		4296		5728		7160		10740	
Electrical	**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
	Electrical time constant	Coils @ 25°C	t_e	ms	8.5											
Thermal	**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	
	Watercooling flow	for ΔT=3K	Ow	l/min	3.1		4		4.8		6.2		8		12	
	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.*

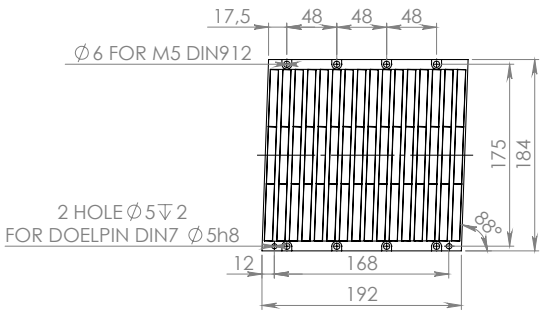
KMC79S SERIES - IRON CORE LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

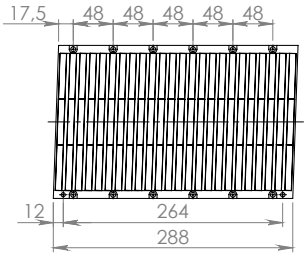
MAGNET PLATES



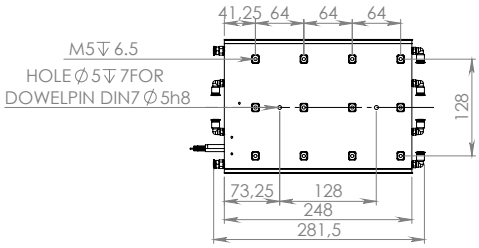
KMM790192



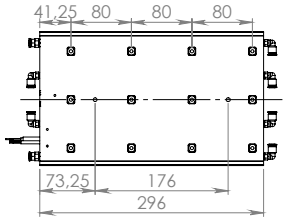
KMM790288



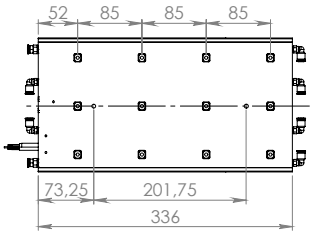
KMC79S-II27N / II27H



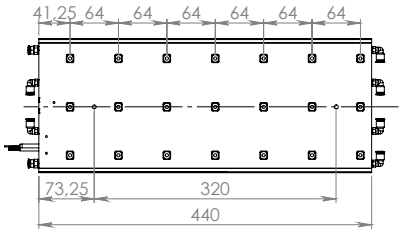
KMC79S-II34N / II34H



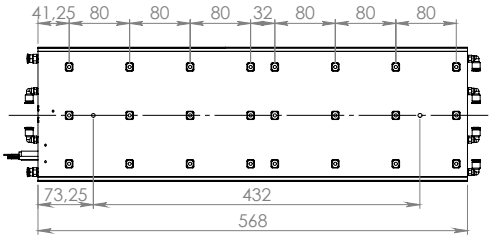
KMC79S-II41N / II41H



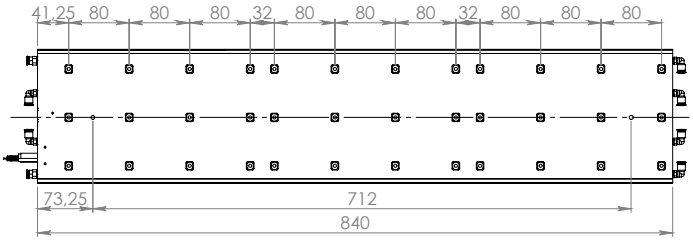
KMC79S-II54N / II54H



KMC79S-II68N / II68H



KMC79S-II10N / II10H



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*

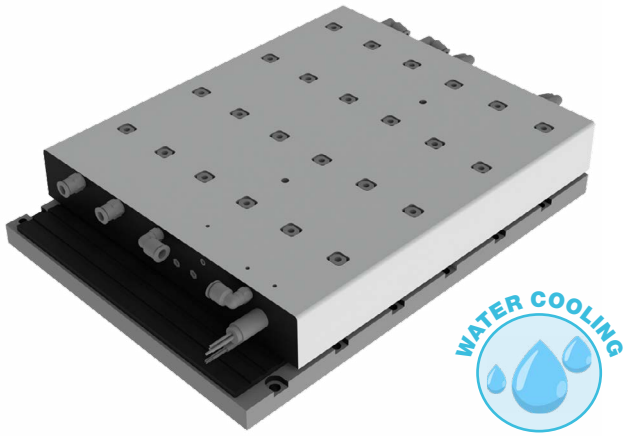
KMC80S SERIES - IRON CORE LINEAR MOTOR

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.



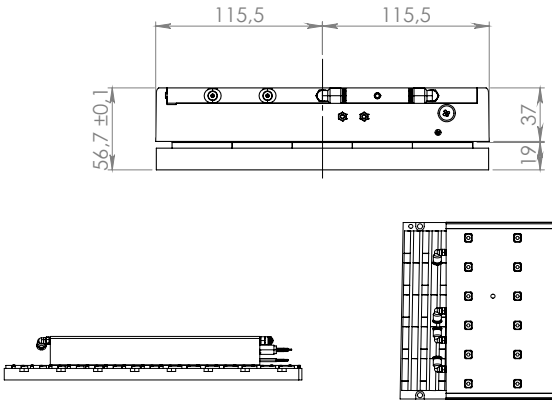
	Parameter	Remarks	Sym	Unit	KMC80S					
Performance	**Winding type**				II34H	II42H	II50H	II67N	II84H	II12H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 380 $V_{ac\ rms}$ (600V_{dc})					
	Ultimate force @ 10°C/s increase	Magnet @ 25ºC	F_u	N	3360	4200	5040	6720	8400	12600
	Peak force @ 6°C/s increase	Magnet @ 25ºC	F_p	N	3200	4000	4800	6400	8000	12000
	Continuous force watercooled**	Coils @ 110ºC	F_{cw}	N	2080	2600	3120	4160	5200	7800
	Continuous force aircooled*	Coils @ 110ºC	F_c	N	1600	2000	2400	3200	4000	6000
	Maximum speed**	@ 600 V	V_{max}	m/s	3.0					
	Motor force constant	Mount. sfc. @ 20ºC	K	N/A_{rms}	174					
	Motor constant	Coils @ 25ºC	S	N^2/W	1802	2243	2883	3604	4485	12615
Electrical	**Ultimate current**	Magnet @ 25ºC	I_u	A_{rms}	26	34	40	52	65	98
	Peak current	Magnet @ 25ºC	i_p	A_{rms}	21	27	32	43	53	80
	Continuous current water cooled	Coils @ 110ºC	I_{cw}	A_{rms}	12	15	18	24	30	45
	Continuous current air cooled	Coils @ 110ºC	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 @ 25ºC ex. cable	R_{ph}	Ω	2.8	2.25	1.75	1.4	1.125	0.8
	Induction per phase	I < 0.6 Ip	I_{ph}	mH	28	22.5	17.5	14	11.3	8
	Electrical time constant	Coils @ 25ºC	T_e	ms	10					
Thermal	**Max. continuous power loss**	All coils	P_c	W	1847	2319	2597	3693	4638	6957
	Thermal resistance	Coils to mount. sfc.	R_{th}	ºC/W	0.08	0.06	0.05	0.04	0.03	0.01
	Watercooling flow	for ΔT=3K	Ow	l/min	4.1	5.2	6.2	8.2	10.4	15.5
	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 milliones cycles			
	Bending Radius Static	Minimum			4x cable diameter		5x cable diameter			
	Bending Radius Dynamic	Minimum			7,5x cable diameter		10x cable diameter			

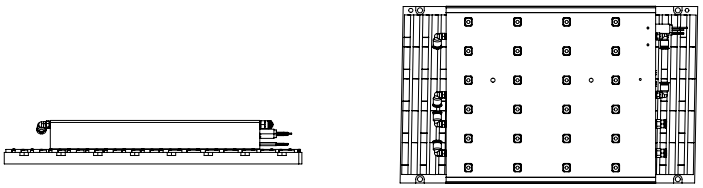
** These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.*
*** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.*
**** Depending on bending radius, velocity and acceleration.*

KMC80S SERIES - IRON CORE LINEAR MOTOR

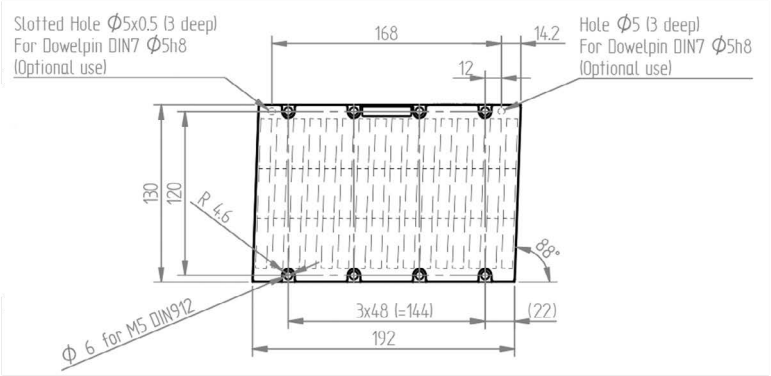
DIMENSIONS AND SPECIFICATIONS

MAGNET PLATES

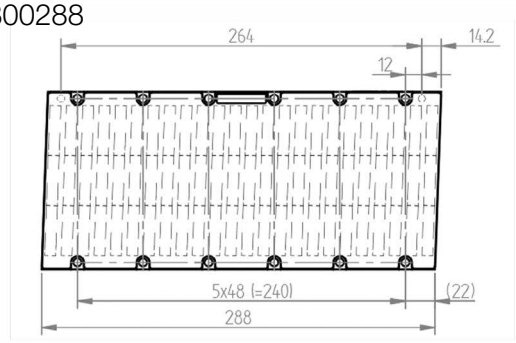




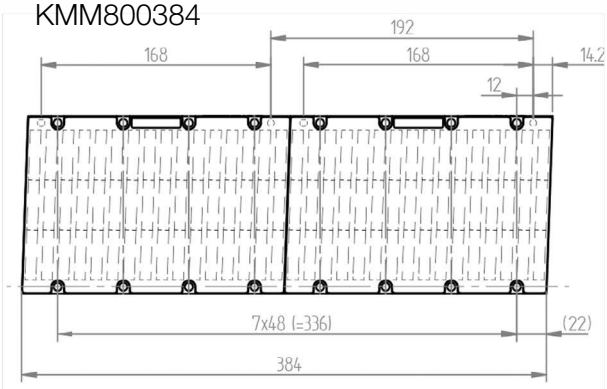
KMM800192



KMM800288

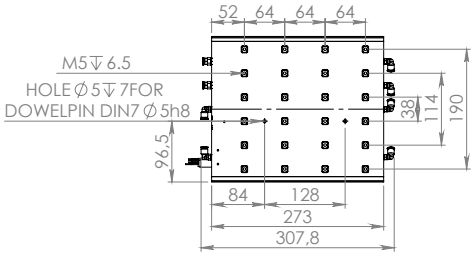


KMM800384

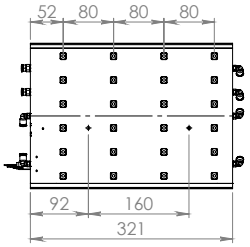


Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
** All sizes are in mm*

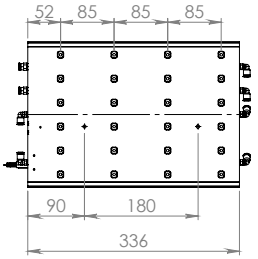
KMC80S-II34H



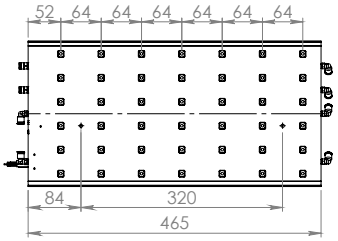
KMC80S-II42H



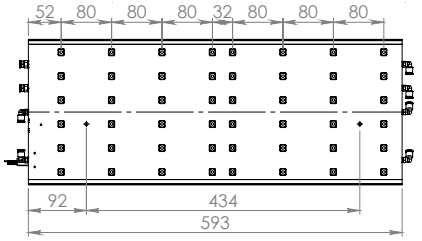
KMC80S-II50H



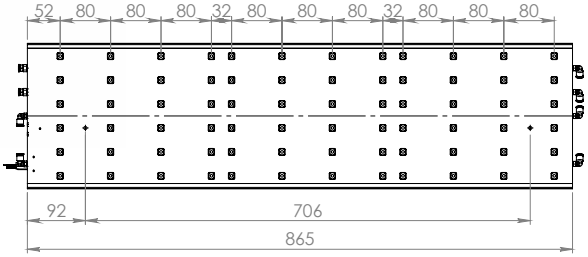
KMC80S-II67N



KMC80S-II84H



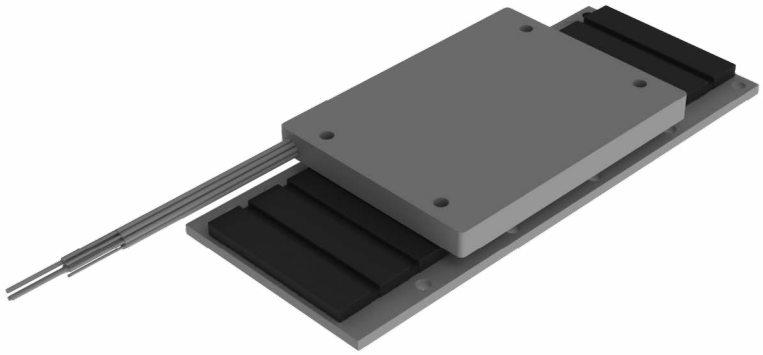
KMC80S-II13H



KMC89S SERIES - IRONLESS LINEAR MOTOR
DIMENSIONS AND SPECIFICATIONS

Magnet plate dimensions		
Code	**KMM890066**	**KMM890099**
Le (mm)	66	99
M5 bolts	8	10
Mass (kg/m)	1,06	
Magnet yokes can be butted together.		

Code	**KMM890115**	**KMM890264**
Le (mm)	115	264
M5 bolts	12	26
Mass (kg/m)	1,06	
Magnet yokes can be butted together.		



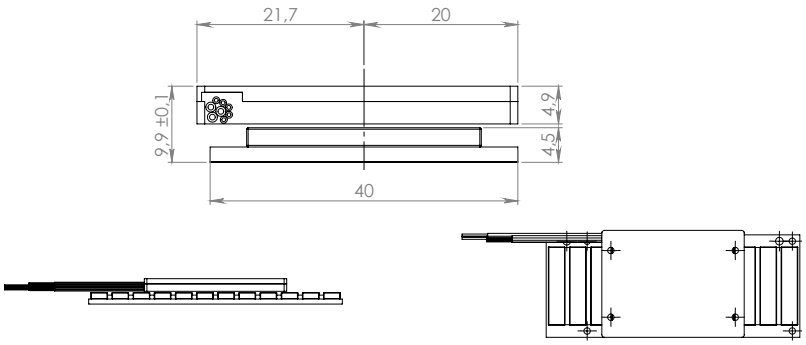
	Parameter	Remarks	Sym	Unit	KMC89S		
Performance	**Winding type**				IU02H	IU04H	IU06H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 45V $_{ac\ rms}$ (60V$_{dc}$)		
	Peak force @ 6°C/s increase	Magnet @ 25°C	F_p	N	20	40	60
	Continuous force*	Coils @ 110°C	F_c	N	5	10	15
	Maximum speed**	@ 60 V	V_{max}	m/s	6		
	Motor force constant	Mount. sfc. @ 20°C	K	N/A_{rms}	6		
	Motor constant	Coils @ 25°C	S	N^2/W	3	6	9
Electrical	**Peak current**	Magnet @ 25°C	i_p	A_{rms}	3.3	6.7	10
	Continuous current air cooled	Coils @ 110°C	I_c	A_{rms}	0.8	1.7	2.5
	Back EMF Phase-Phase$_{peak}$		B_{emf}	V/m/s	5		
	Resistance per phase	Coils @ 25°C ex. cable	R_{ph}	Ω	4.75	2.38	1.58
	Induction per phase	I < 0.6 Ip	I_{ph}	mH	0.8	0.4	0.3
	Electrical time constant	Coils @ 25°C	T_e	ms	0.16		
Thermal	**Max. continuous power loss**	All coils	P_c	W	11.2	22.4	33.6
	Thermal resistance	Coils to mount. sfc.	R_{th}	°C/W	1.6	0.8	0.53
	Temperature cut-off / sensor				None		
Mechanical	**Coil unit weight**	ex. cables	W	kg	0.03	0.05	0.08
	Coil unit length	ex. cables	L	mm	45	78	111
	Motor attraction force	rms @ 0 A	F_a	N	0		
	Magnet pitch NN		t	mm	16,5		
	Cable Type (power)	Length 3 m	d	mm (AWG)	Leadwires 3*0.3mm²		
	Cable Type (sensor)	Length 3 m	d	mm (AWG)	NA		
	Cable Life	Minimum			12,000,000		
	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.*

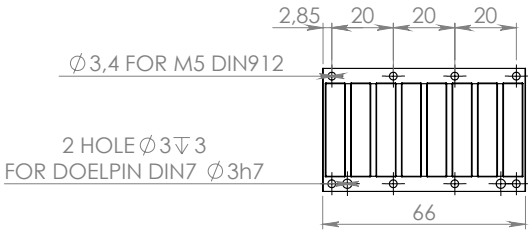
KMC89S SERIES - IRONLESS LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

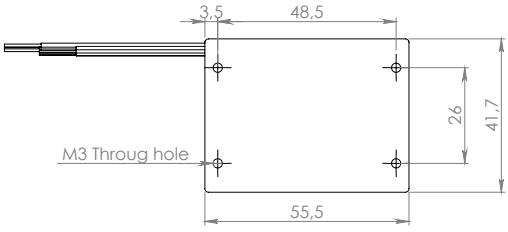
MAGNET PLATES



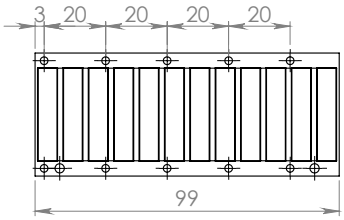
KMM890066



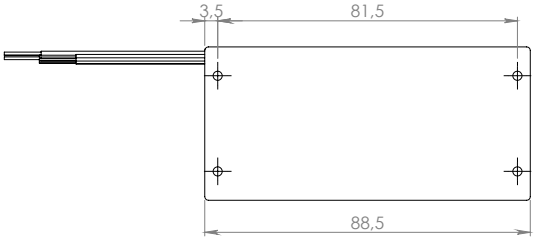
KMC89S-IU02N



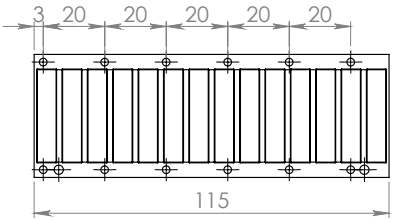
KMM890099



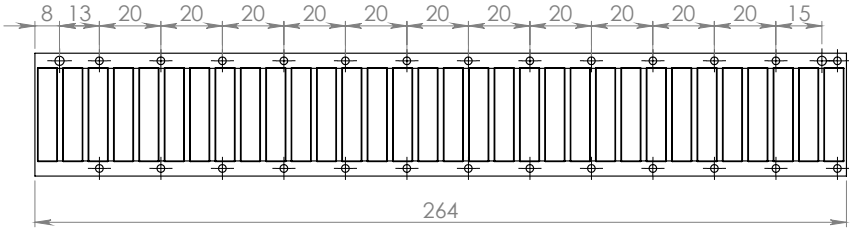
KMC89S-IU04H



KMM890115



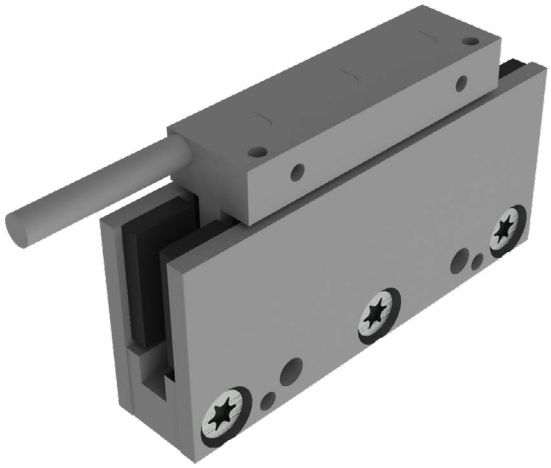
KMM890264



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*

KMC90S SERIES - IRONLESS LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS



Magnet plate dimensions			
Code	**KMM900072**	**KMM900096**	**KMM900144**
Le (mm)	72	96	144
M5 bolts	2	3	4
Mass (kg/m)	2,3		
Magnet plates can be butted together.			

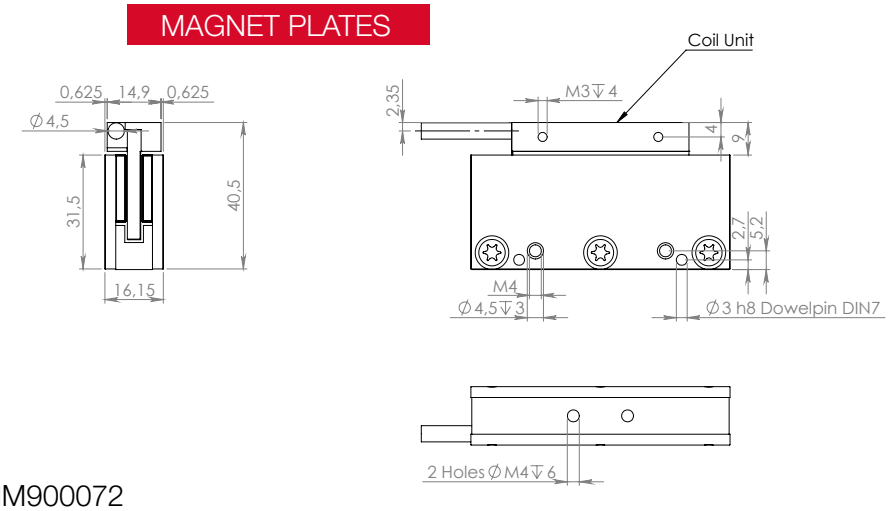
	Parameter	Remarks	Sym	Unit	KMC90S	
Performance	**Winding type**				IU04H	IU09H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 45V $_{ac\ rms}$ (60V$_{dc}$)	
	Peak force @ 20°C/s increase	Magnet @ 25°C	F_p	N	46	92
	Continuous force*	Coils @ 110°C	F_c	N	11,5	23
	Maximum speed**	@ 600 V	V_{max}	m/s	5	
	Motor force constant	Mount. sfc. @ 20°C	K	N/A$_{rms}$	7,3	
	Motor constant	Coils @ 25°C	S	N²/W	7,5	15
Electrical	**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	I < 0.6 Ip	I_{ph}	mH	0,8	0,4
	Electrical time constant	Coils @ 25°C	T_e	ms	0,355	
Thermal	**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
	Temperature cut-off / sensor				PTC 1kΩ / NTC	
Mechanical	**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.*

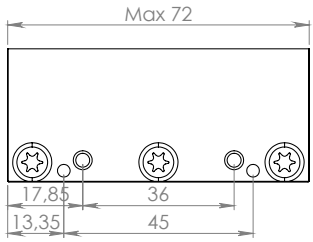
KMC90S SERIES - IRONLESS LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

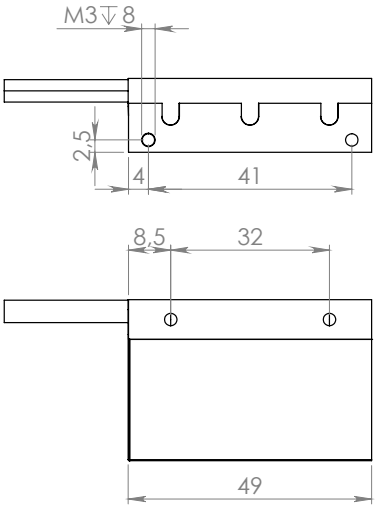
MAGNET PLATES



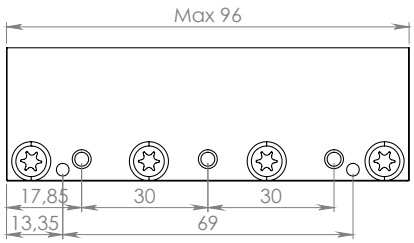
KMM900072



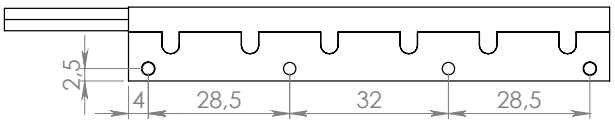
KMC90S-IU04N



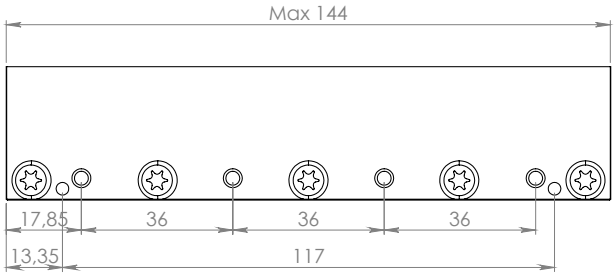
KMM900096

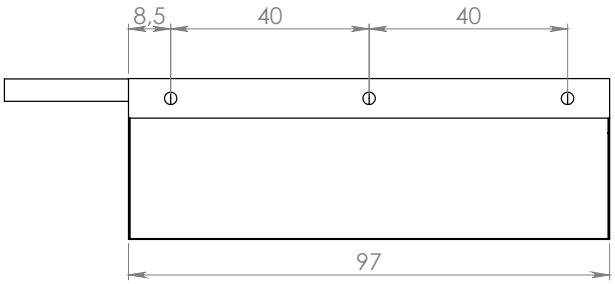


KMC90S-IU09H



KMM900144

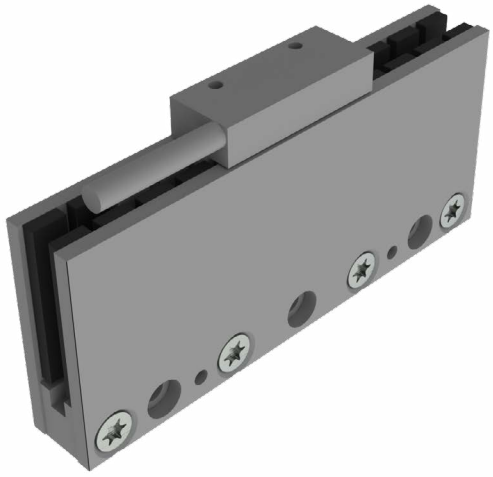




Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
** All sizes are in mm*

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.			

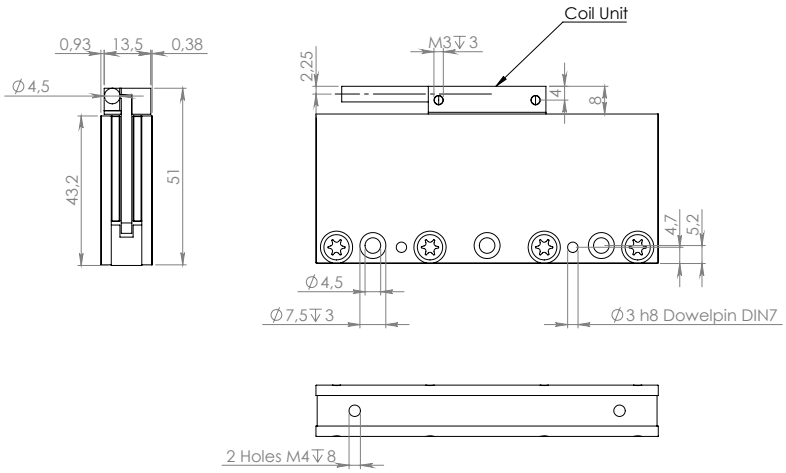
	Parameter	Remarks	Sym	Unit	KMC91S	
Performance	**Winding type**				IU03H	IU07H
	Motortype, max voltage ph-ph				3-phase synchronous Ironless, 45V $_{ac\ rms}$ (60V$_{dc}$)	
	Peak force @ 20°C/s increase	Magnet @ 25ºC	F_u	N	36	72
	Continuous force*	Coils @ 80ºC	F_c	N	10	20
	Maximum speed**	@ 60 V	V_{max}	m/s	5	5
	Motor force constant	Mount. sfc. @ 20ºC	K	N/A$_{rms}$	11,4	11,4
	Motor constant	Coils @ 25ºC	S	N^2/W	9,2	18,3
Electrical	**Peak current**	Magnet @ 25ºC	I_p	A$_{rms}$	3,1	6,2
	Maximum continuous current	Coils @ 80ºC	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 @ 25ºC ex. cable	R_{ph}	Ω	4,7	2,4
	Induction per phase		I_{ph}	mH	0,75	0,38
	Electrical time constant*	Coils @ 25ºC	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}	ºC/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.*

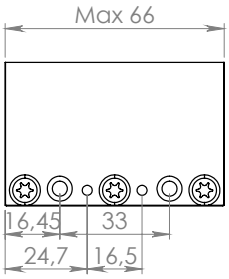
KMC91S SERIES - IRONLESS LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

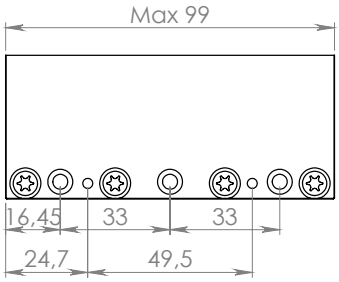
MAGNET PLATES



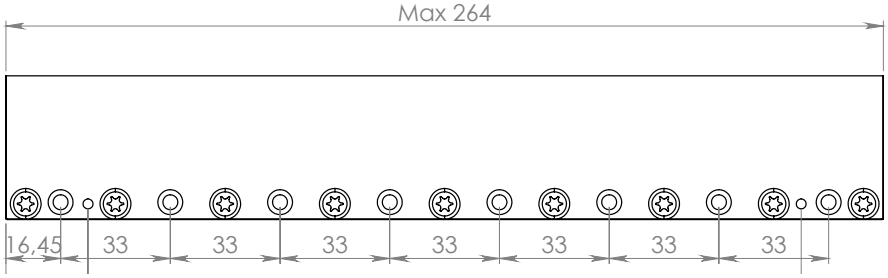
KMM910066



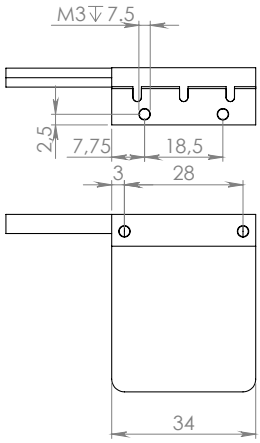
KMM910099



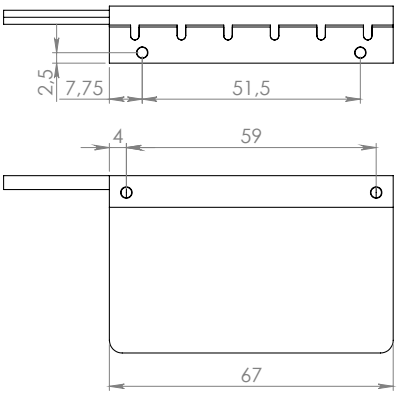
KMM910264



KMC91S-IU03H



KMC91S-IU07H



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*

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.		

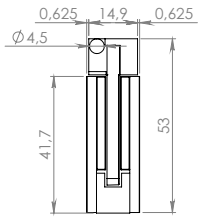
	Parameter	Remarks	Sym	Unit	KMC92S	
Performance	**Winding type**				IU04H	IU08H
	Motortype, max voltage ph-ph				3-phase synchronous Ironless, 45V $_{ac\ rms}$ (60V$_{dc}$)	
	Peak force @ 20°C/s increase	Magnet @ 25°C	F_u	N	42,5	85
	Continuous force*	Coils @ 110°C	F_c	N	19,5	39
	Maximum speed**	@ 60 V	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	

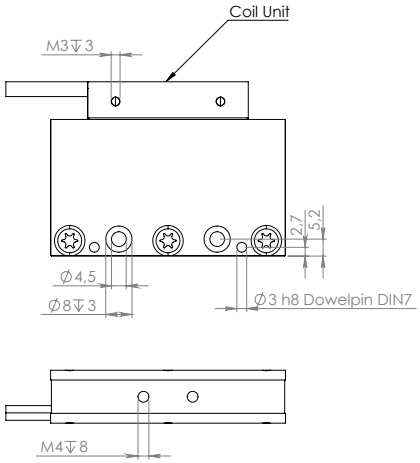
** These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.*
*** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.*
**** Depending on bending radius, velocity and acceleration.*

KMC92S SERIES - IRONLESS LINEAR MOTOR

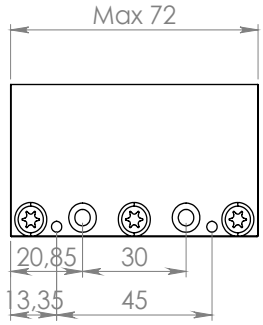
DIMENSIONS AND SPECIFICATIONS

MAGNET PLATES

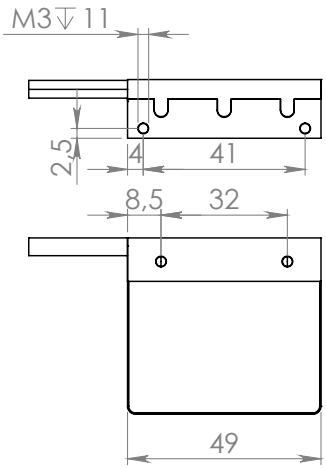




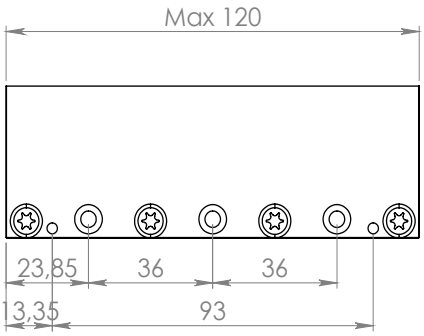
KMM920072



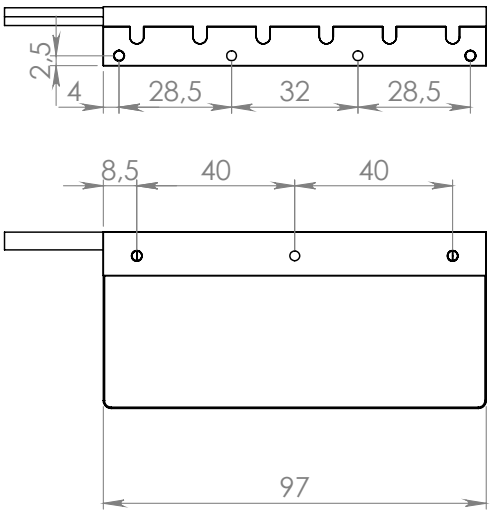
KMC92S-IU04H



KMM920120



KMC92S-IU08H



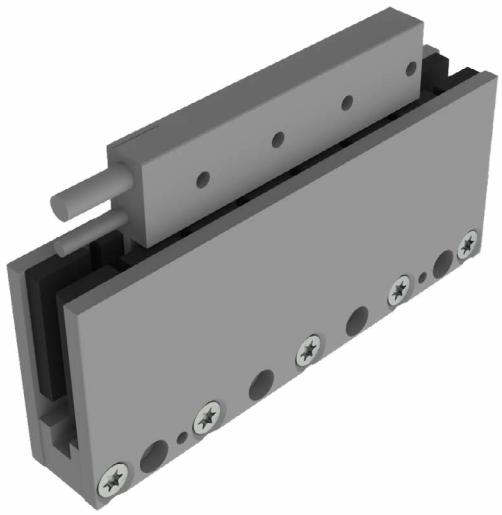
Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
** All sizes are in mm*

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.		



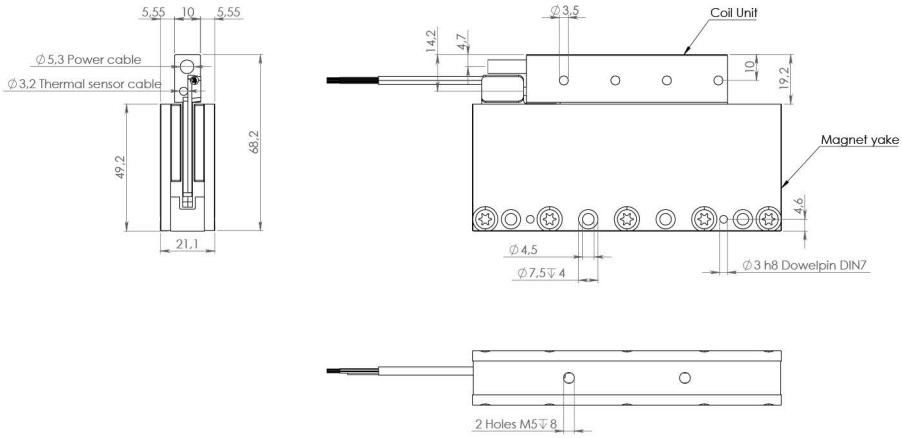
	Parameter	Remarks	Sym	Unit	KMC93S							
Performance	**Winding type**				IU01N	IU01H	IU02N	IU02H	IU03N	IU03H	IU04N	IU04H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 230 $V_{ac\ rms}$ (V_{dc})							
	Ultimate force @ 20°C/s increase	Magnet @ 25ºC	F_u	N	100		200		300		400	
	Continuous force*	Coils @ 110ºC	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. @ 20ºC	K	N/A_{rms}	36.3	19.9	36.3	19.9	36.3	19.9	36.3	19.9
	Motor constant	Coils @ 25ºC	S	N^2/W	24		48		71		95	
Electrical	**Peak current**	Magnet @ 25ºC	i_p	A_{rms}	2.8	5.0	5.5	10.0	8.3	15.0	11.0	20.0
	Maximum continuous current	Coils @ 110ºC	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 @ 25ºC ex. cable	R_{ph}	Ω	18.5	5.5	9.3	2.8	6.2	1.8	4.6	1.4
	Induction per phase		I_{ph}	mH	6	1.8	3	0.9	2	0.6	1.5	0.4
	Electrical time constant*	Coils @ 25ºC	T_e	ms	0.35							
Thermal	**Max. continuous power loss**	All coils	P_c	W	47		95		142		190	
	Thermal resistance	Coils to mount. sfc.	R_{th}	ºC/W	1.8		0.9		0.6		0.45	
	Thermal time constant*	up to 63% max. coiltemp.	T_{th}	s	36							
	Temperature cut-off / sensor				PTC 1kΩ / NTC							
Mechanical	**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)							
	Cable Type (sensor)	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.*

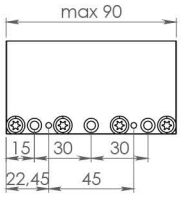
KMC93S SERIES - IRONLESS LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

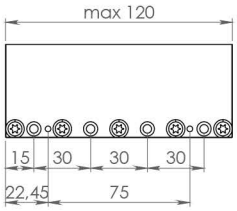
MAGNET PLATES



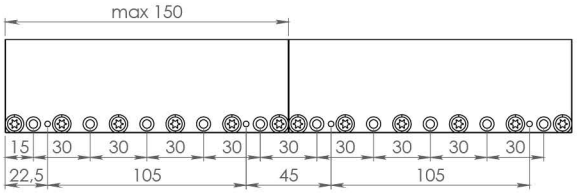
KMM930090



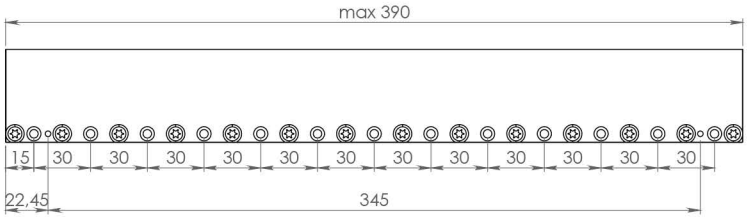
KMM930120



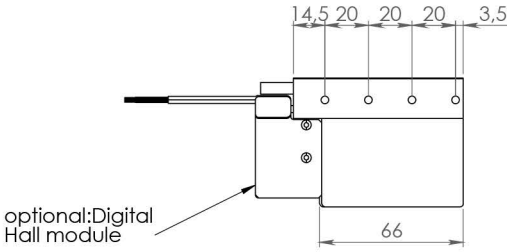
KMM930150



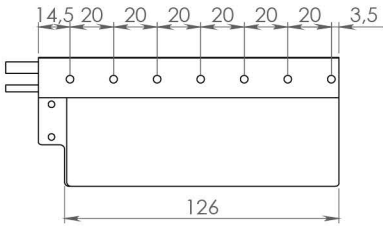
KMM930390



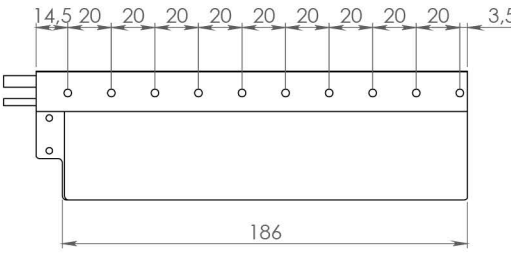
KMC93S-IU01N / IU01H



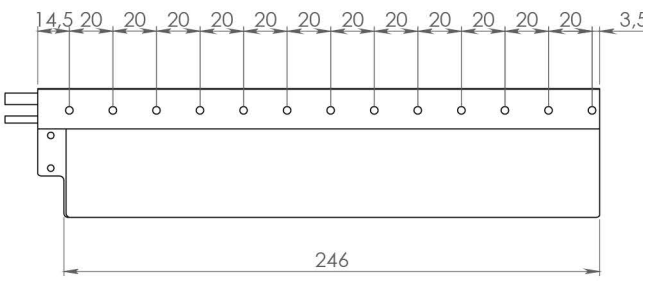
KMC93S-IU02N / IU02H



KMC93S-IU03N / IU03H



KMC93S-IU04N / IU04H



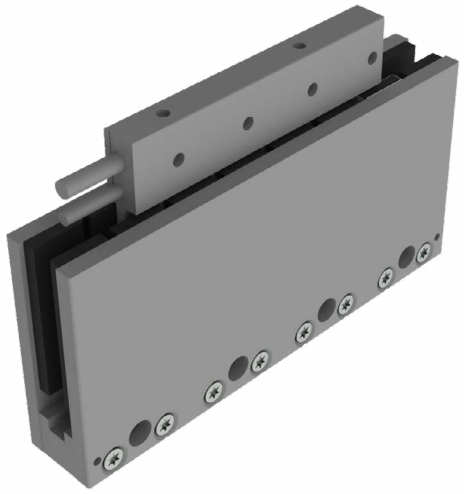
Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.
** All sizes are in mm*

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	
Magnet yokes can be butted together.		

Code	**KMM950210**	**KMM950546**
Le (mm)	210	546
M5 bolts	5	13
Mass (kg/m)	11,2	
Magnet yokes can be butted together.		



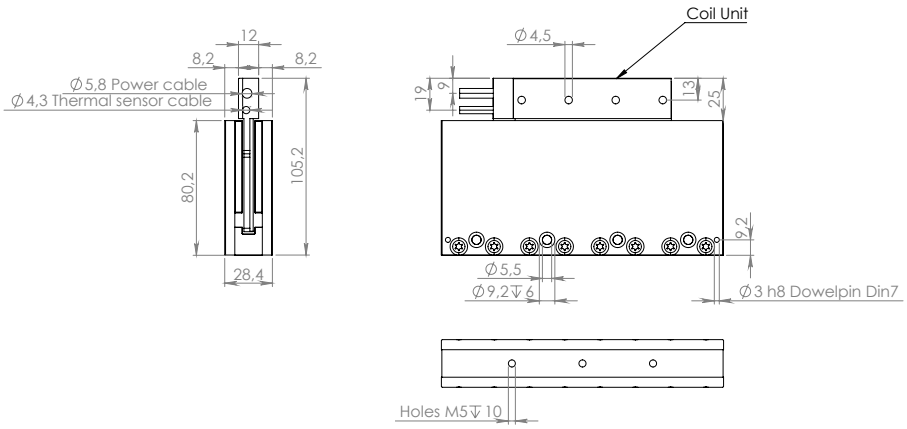
	Parameter	Remarks	Sym	Unit	KMC95S									
Performance	**Winding type**				IU02N	IU02H	IU05N	IU05H	IU07N	IU07H	IU10N	IU10H	IU12N	IU12H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 230V $_{ac\ rms}$ (325V$_{dc}$)									
	Peak force @ 20°C/s increase	Magnet @ 25ºC	F_p	N	240		480		720		960		1200	
	Continuous force*	Coils @ 110ºC	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. @ 20ºC	K	N/A$_{rms}$	68	27,5	68	27,5	68	27,5	68	27,5	68	27,5
	Motor constant	Coils @ 25ºC	S	N^2/W	97		195		290		390		485	
Electrical	**Peak current**	Magnet @ 25ºC	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 @ 110ºC	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 @ 25ºC 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
	Electrical time constant*	Coils @ 25ºC	t_e	ms	0,8									
Thermal	**Max. continuous power loss**	All coils	P_c	W	67		134		200		270		335	
	Thermal resistance	Coils to mount. sfc.	R_{th}	ºC/W	1,3		0,65		0,43		0,32		0,26	
	Thermal time constant*	up to 63% max. coiltemp.	t_{th}	s	72									
	Temperature cut-off / sensor				PTC 1kΩ / NTC									
Mechanical	**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.*

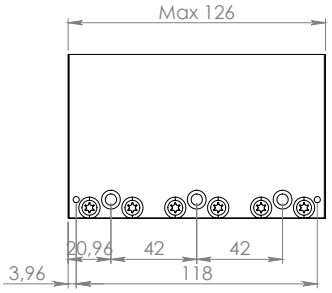
KMC95S SERIES - IRONLESS LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

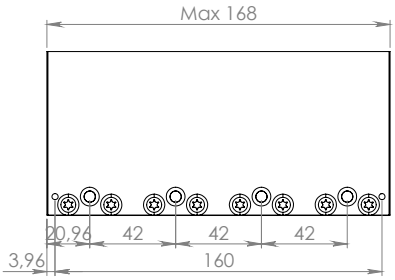
MAGNET PLATES



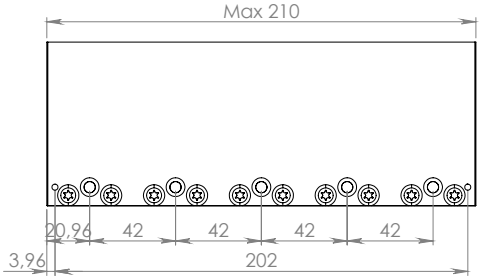
KMM950126



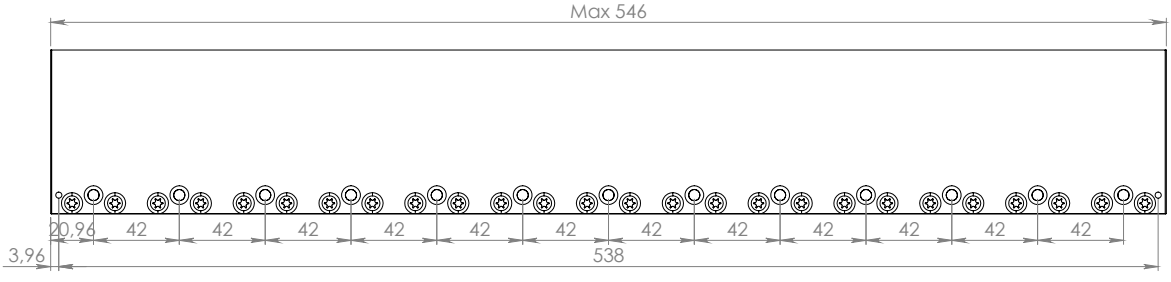
KMM950168



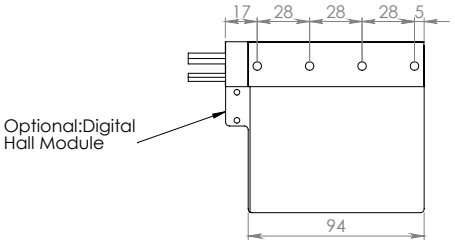
KMM950210



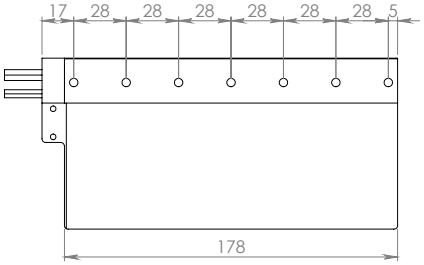
KMM950546



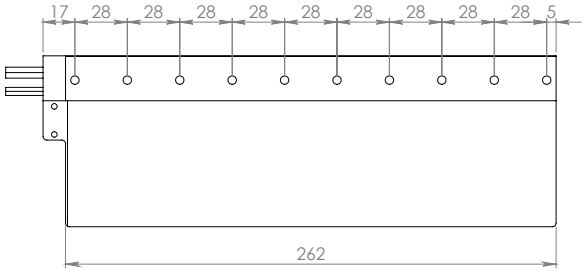
KMC95S-IU02N / IU02H



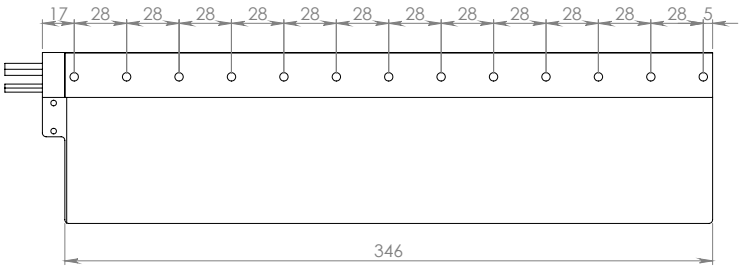
KMC95S-IU05N / IU05H



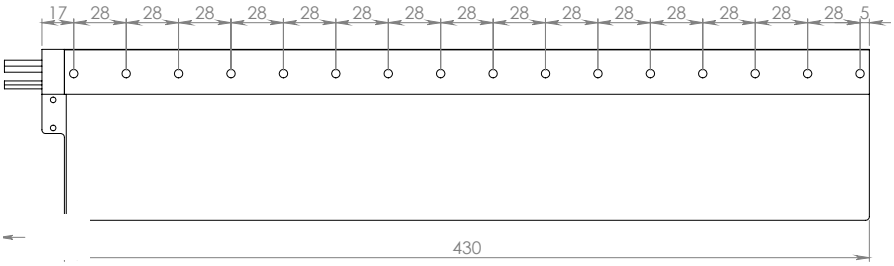
KMC95S-IU07N / IU07H



KMC95S-IU10N / IU10H

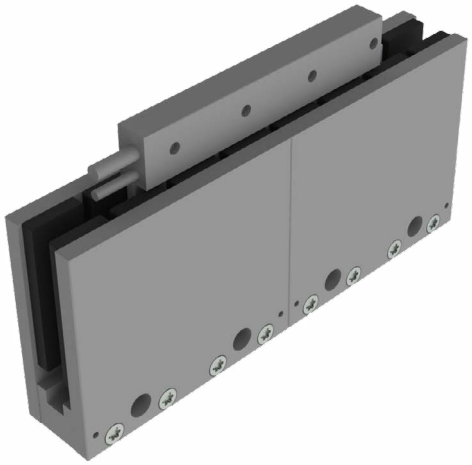


KMC95S-IU12N / IU12H



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*

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		
Magnet plates can be butted together.			

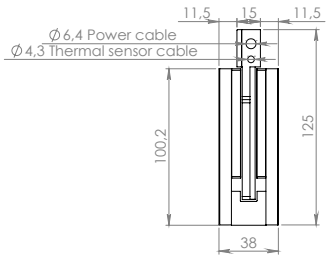
	Parameter	Remarks	Sym	Unit	KMC97S									
Performance	**Winding type**				IU06N	IU06H	IU13N	IU13H	IU19N	IU19H	IU26N	IU26H	IU39N	IU39H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 230V $_{ac\ rms}$ (320V$_{dc}$)									
	Peak force @ 20°C/s increase	Magnet @ 25ºC	F_p	N	645		1290		1935		2580		3870	
	Continuous force*	Coils @ 110ºC	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. @ 20ºC	K	N/A$_{rms}$	107	43,4	107	43,4	107	43,4	107	43,4	107	43,4
	Motor constant	Coils @ 25ºC	S	N^2/W	242		483		725		966		1449	
Electrical	**Peak current**	Magnet @ 25ºC	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 @ 110ºC	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 @ 25ºC 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
	Electrical time constant*	Coils @ 25ºC	t_e	ms	1,8									
Thermal	**Max. continuous power loss**	All coils	P_c	W	88		176		264		352		528	
	Thermal resistance	Coils to mount. sfc.	R_{th}	ºC/W	1,03		0,52		0,34		0,25		0,18	
	Temperature cut-off / sensor				PTC 1kΩ / NTC									
Mechanical	**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									

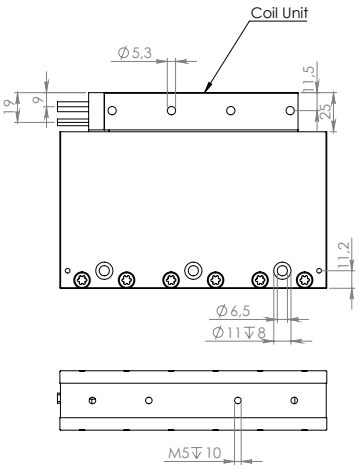
** These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.*
*** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.*
**** Depending on bending radius, velocity and acceleration.*

KMC97S SERIES - IRONLESS LINEAR MOTOR

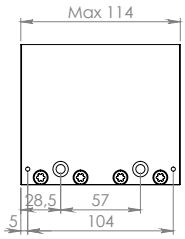
DIMENSIONS AND SPECIFICATIONS

MAGNET PLATES

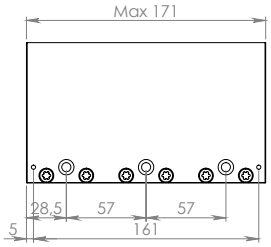




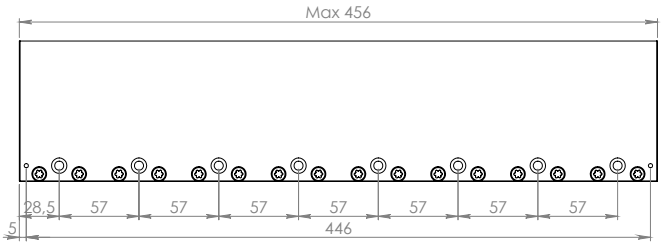
KMM970144



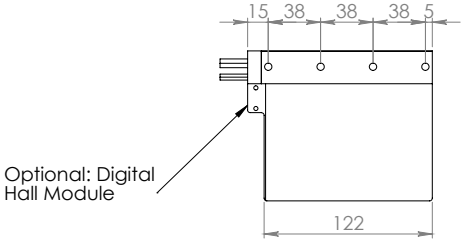
KMM970171



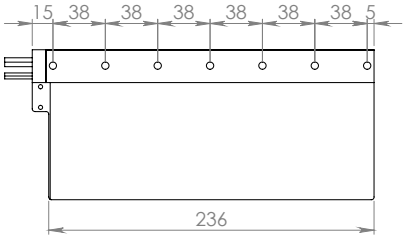
KMM970456



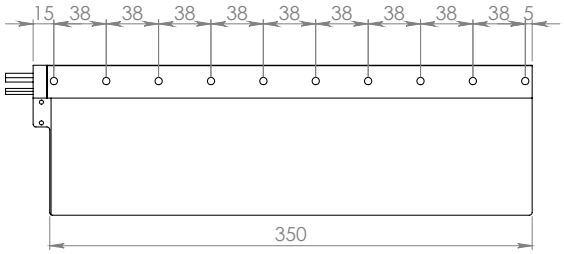
KMC97S-IU64N / IU64H



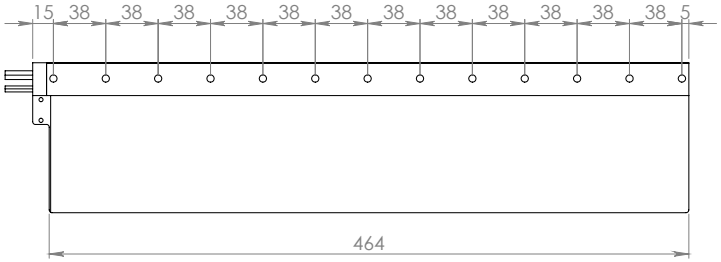
KMC97S-IU13N / IU13H



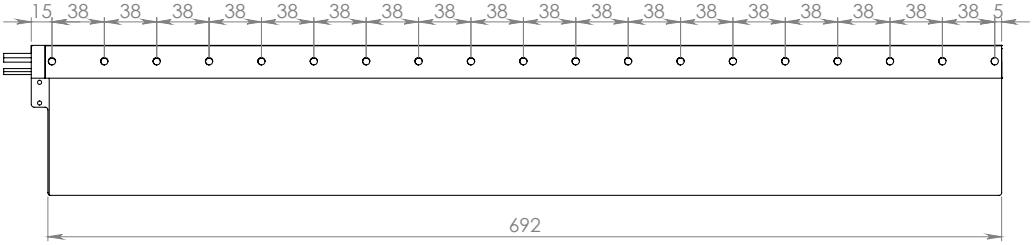
KMC97S-IU19N / IU19H



KMC97S-IU26N / IU26H



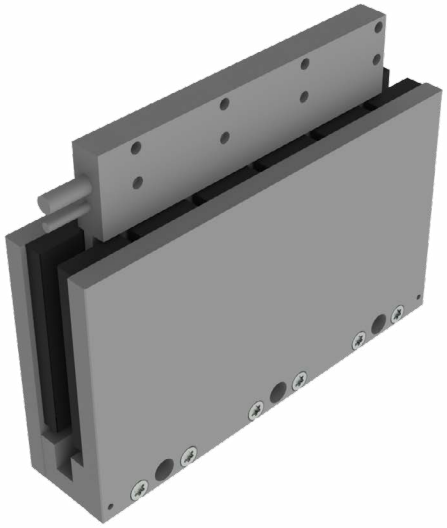
KMC97S-IU39N / IU39H



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.			

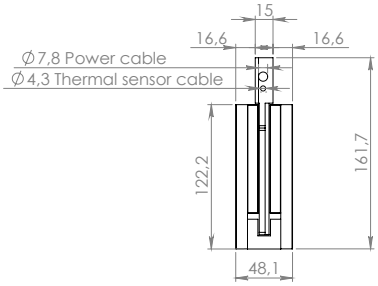
	Parameter	Remarks	Sym	Unit	KMC98S								
Performance	**Winding type**				IU10N	IU10H	IU20N	IU20H	IU30N	IU30H	IU40N	IU40H	IU50N
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 230V $_{ac\ rms}$ (320V$_{dc}$)								
	Peak force @ 20°C/s increase	Magnet @ 25°C	F_p	N	1000		2000		3000		4000		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
	Motor constant	Coils @ 25°C	S	N²/W	913		1826		2739		3652		4565
Electrical	**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
	Electrical time constant*	Coils @ 25°C	t_e	ms	3								
Thermal	**Max. continuous power loss**	All coils	P_c	W	92		183		2(18)5		367		459
	Thermal resistance	Coils to mount. sfc.	R_{th}	°C/W	0,8		0,4		0,3		0,2		0,15
	Temperature cut-off / sensor				PTC 1kΩ / NTC								
Mechanical	**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								

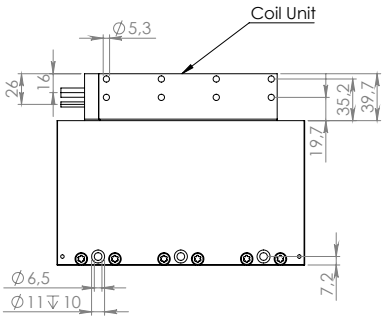
** These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.*
*** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.*
**** Depending on bending radius, velocity and acceleration.*

KMC98S SERIES - IRONLESS LINEAR MOTOR

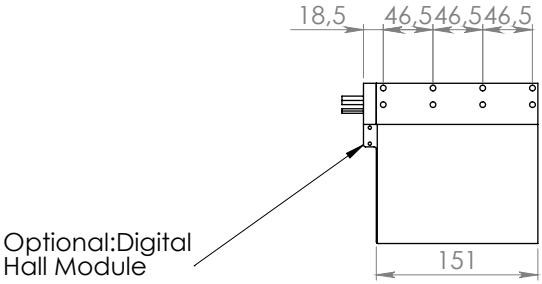
DIMENSIONS AND SPECIFICATIONS

MAGNET PLATES

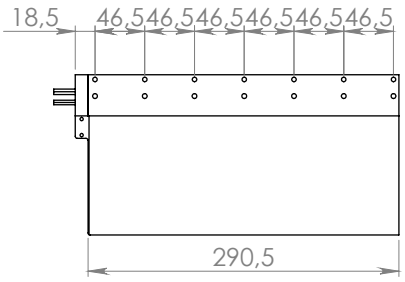




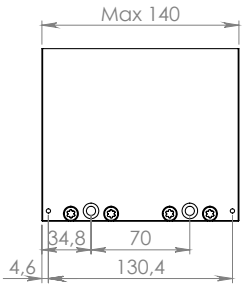
KMC98S-IU10N / IU10H



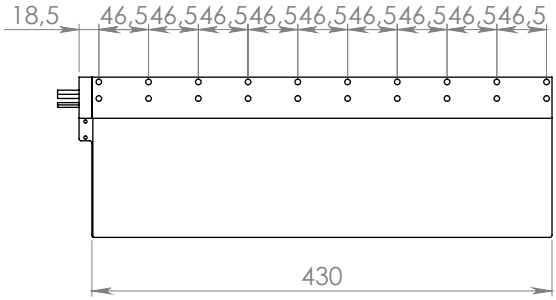
KMC98S-IU20N / IU20H



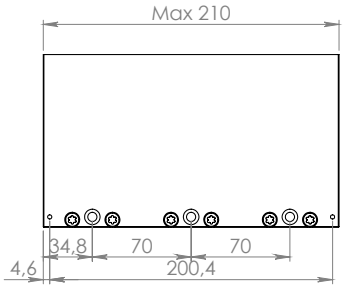
KMM980140



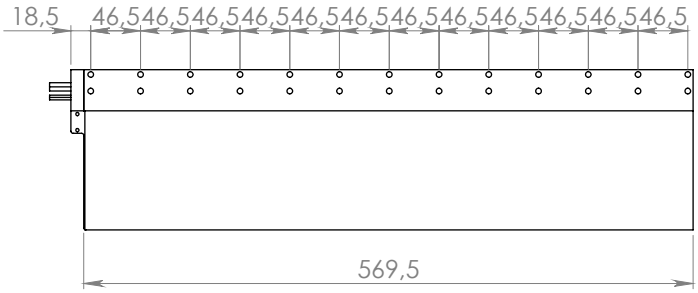
KMC98S-IU30N / IU30H



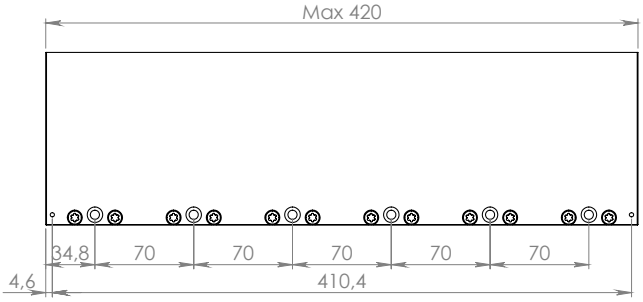
KMM980210



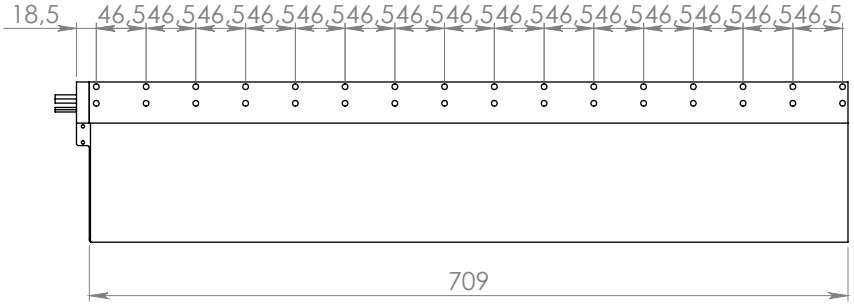
KMC98S-IU40N / IU40H



KMM980420

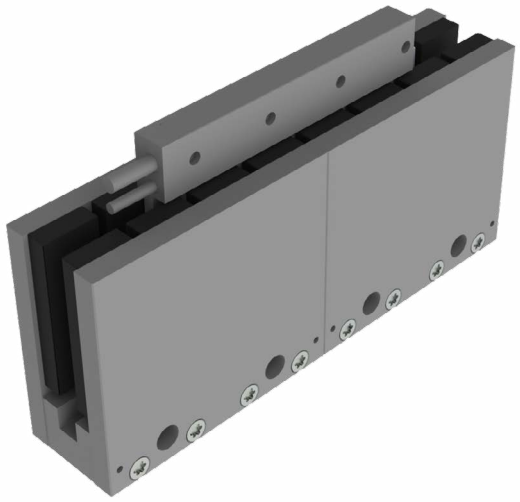


KMC98S-IU50N



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*

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.			

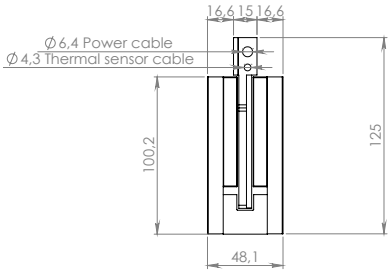
	Parameter	Remarks	Sym	Unit	KMC99S									
Performance	**Winding type**				IU07N	IU07H	IU15N	IU15H	IU22N	IU22H	IU29N	IU29H	IU44N	IU44H
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 230V $_{ac\ rms}$ (320V$_{dc}$)									
	Peak force @ 20°C/s increase	Magnet @ 25ºC	F_p	N	730		1460		2190		2920		4380	
	Continuous force*	Coils @ 110ºC	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. @ 20ºC	K	N/A$_{rms}$	127	49	127	49	127	49	127	49	127	49
	Motor constant	Coils @ 25ºC	S	N²/W	340		680		1020		1359		2039	
Electrical	**Peak current**	Magnet @ 25ºC	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 @ 110ºC	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 @ 25ºC 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
	Electrical time constant*	Coils @ 25ºC	t_e	ms	1,8									
Thermal	**Max. continuous power loss**	All coils	P_c	W	119		238		357		476		713	
	Thermal resistance	Coils to mount. sfc.	R_{th}	ºC/W	1,03		0,52		0,34		0,25		0,18	
	Temperature cut-off / sensor				PTC 1kΩ / NTC									
Mechanical	**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									

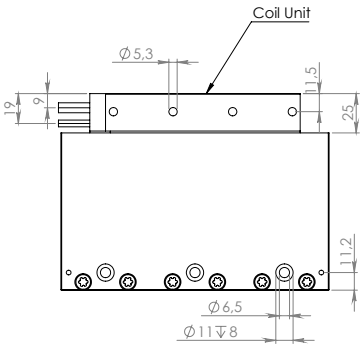
** These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.*
*** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.*
**** Depending on bending radius, velocity and acceleration.*

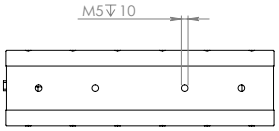
KMC99S SERIES - IRONLESS LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

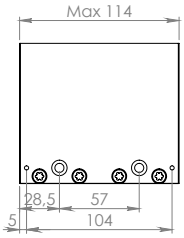
MAGNET PLATES



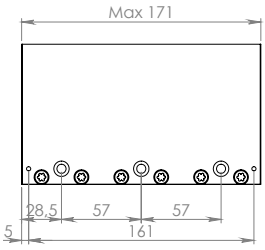




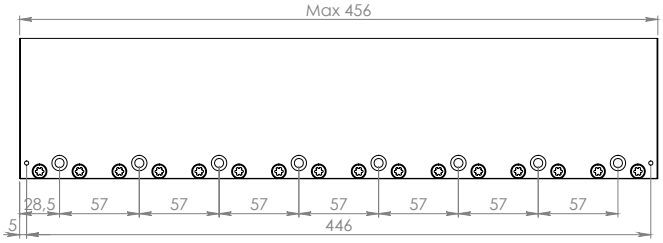
KMM990114



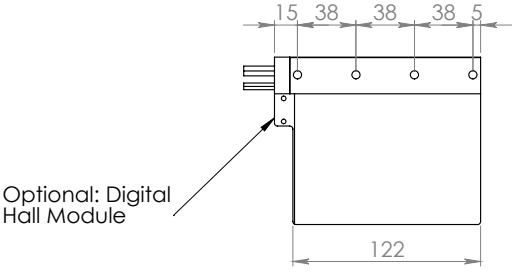
KMM990171



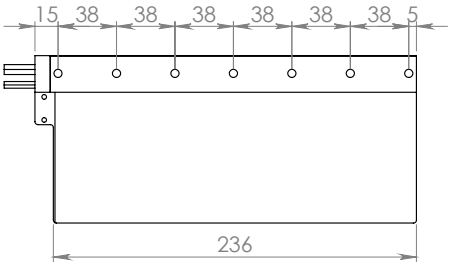
KMM990456



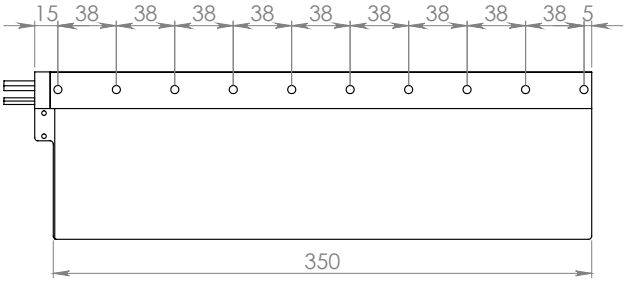
KMC99S-IU73N / IU73H



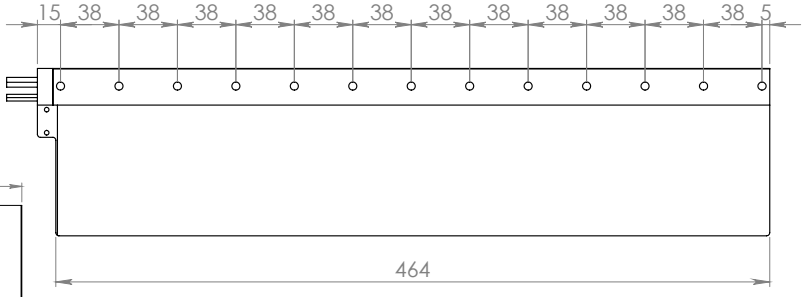
KMC99S-IU15N / IU15H



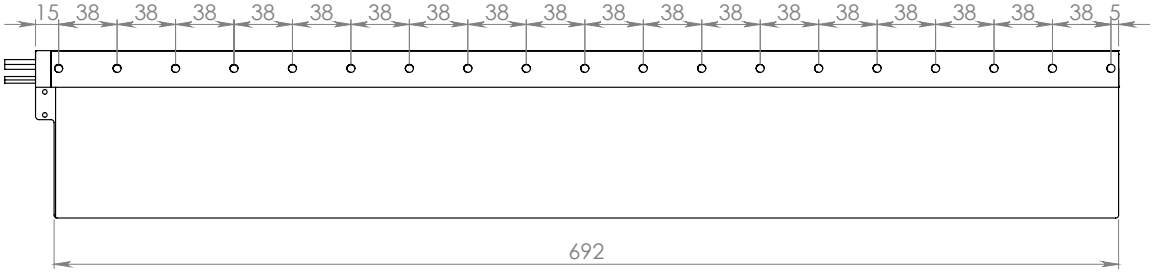
KMC99S-IU22N / IU22H



KMC99S-IU29N / IU29H



KMC99S-IU44N / IU44H



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*

KMC LINEAR MOTOR COIL

ORDER CODE

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

Motor (□□)
Motor technology:
II - Iron core motor
UI - Ironless motor

Winding (□)
Motor winding:
N - Standard winding
H - High-speed winding
I - Low voltage winding

Connectors (□□□)
Typ [2]:
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 lenght 300 cm

Peak force, N (aircooled) [1] (□□)

KMC71S
- **01** - 110N
- **02** - 220N

KMC73S
- **01** - 135N
- **02** - 270N
- **05** - 540N
- **07** - 810N
- **09** - 960N

KMC75S
- **04** - 496N
- **06** - 744N
- **09** - 992N
- **11** - 1240N
- **13** - 1488N
- **18** - 1984N
- **25** - 2480N
- **36** - 3600N

KMC77S
- **18** - 1900N
- **22** - 2375N
- **28** - 2850N
- **38** - 3800N
- **47** - 4750N
- **71** - 7125N

KMC78S
- **23** - 2375N
- **28** - 2850N
- **47** - 4750N
- **71** - 7125N

KMC79S
- **27** - 2700N
- **34** - 3375N
- **41** - 4050N
- **54** - 5400N
- **68** - 6750N
- **10** - 10125N

KMC80S
- **34** - 3360N
- **42** - 4200N
- **50** - 5040N
- **67** - 6720N
- **84** - 8400N
- **12** - 12600N

KMC89S
- **02** - 20N
- **04** - 40N
- **06** - 60N

KMC90S
- **04** - 46N
- **09** - 92N

KMC91S
- **03** - 37N
- **07** - 75N

KMC92S
- **04** - 45N
- **08** - 90N
- **01** - 135N

KMC93S
- **01** - 105N
- **02** - 210N
- **03** - 315N
- **04** - 420N

KMC95S
- **02** - 250N
- **05** - 480N
- **07** - 720N
- **10** - 960N
- **12** - 1200N

KMC97S
- **06** - 645N
- **13** - 1290N
- **19** - 1935N
- **26** - 2580N
- **39** - 3870N

KMC98S
- **10** - 1000N
- **20** - 2000N
- **30** - 3000N
- **40** - 4000N
- **50** - 5000N

KMC99S
- **07** - 730N
- **15** - 1460N
- **22** - 2190N
- **29** - 2920N
- **44** - 4380N

KMM LINEAR MOTOR MAGNETS

DIMENSIONS AND SPECIFICATIONS

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

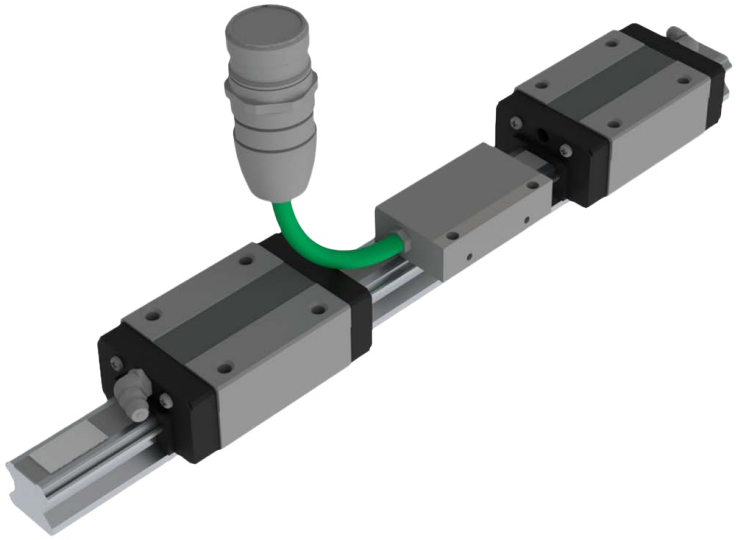
□□□□

Magnet lenght

Lenght:

KMM71S	**0064** - 64mm **0128** - 128mm
KMM73S	**0096** - 96mm **0144** - 144mm **0384** - 384mm
KMM75S	**0192** - 192mm **0288** - 288mm
KMM77S	**0192** - 192mm **0288** - 288mm
KMM78S	**0192** - 192mm **0288** - 288mm
KMM79S	**0192** - 192mm **0288** - 288mm
KMM80S	**0192** - 192mm **0288** - 288mm **0384** - 384mm
KMM89S	**0066** - 66mm **0099** - 99mm **0115** - 115mm **0264** - 264mm
KMM90S	**0072** - 72mm **0096** - 96mm **0144** - 144mm
KMM91S	**0066** - 66mm **0099** - 99mm **0264** - 264mm
KMM92S	**0072** - 72mm **0120** - 120mm
KMM93S	**0090** - 90mm **0120** - 120mm **0150** - 150mm **0390** - 390mm
KMM95S	**0126** - 126mm **0168** - 168mm **0210** - 210mm **0546** - 546mm
KMM97S	**0144** - 144mm **0171** - 171mm **0456** - 456mm
KMM98S	**0140** - 140mm **0210** - 210mm **0420** - 420mm
KMM99S	**0114** - 114mm **0171** - 171mm **0456** - 456mm

KEC00S INCREMENTAL ENCODER
TECHNICAL SPECIFICATIONS



Inductive measuring systems

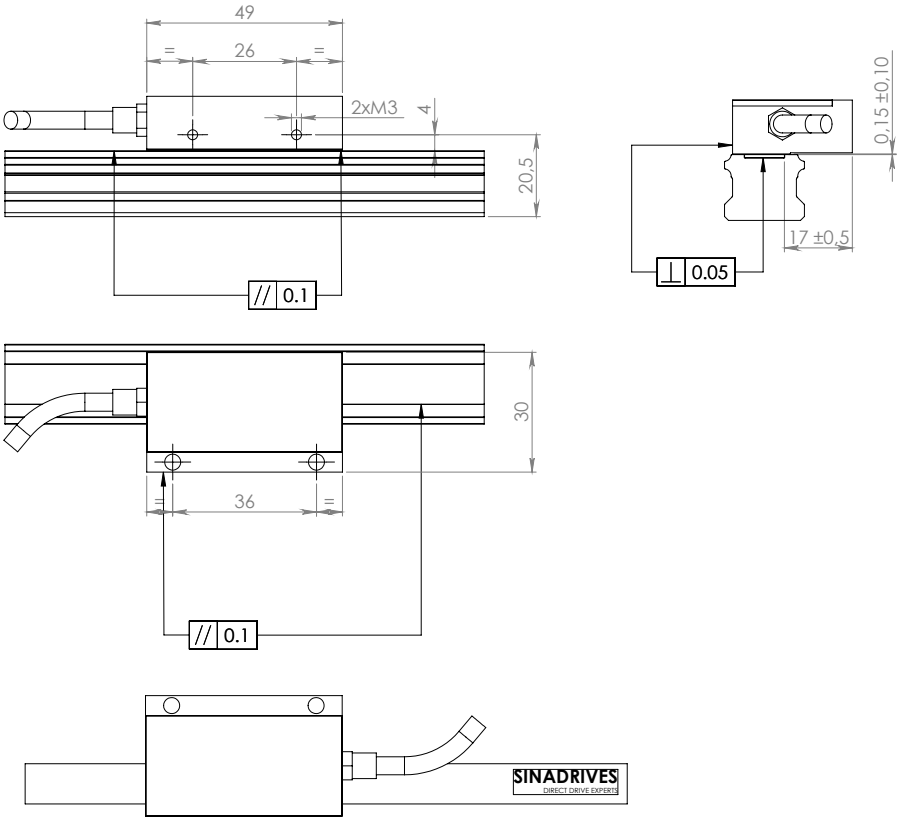
Inductive measuring systems are particularly suitable for applications with linear axes.
Due to its inductive measuring system, this system offers great reliability and resistance to dust, oils, and even wood chips.
The electromagnetic fields do not affect correct operation of the measuring system.
The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

Magnetic measuring systems

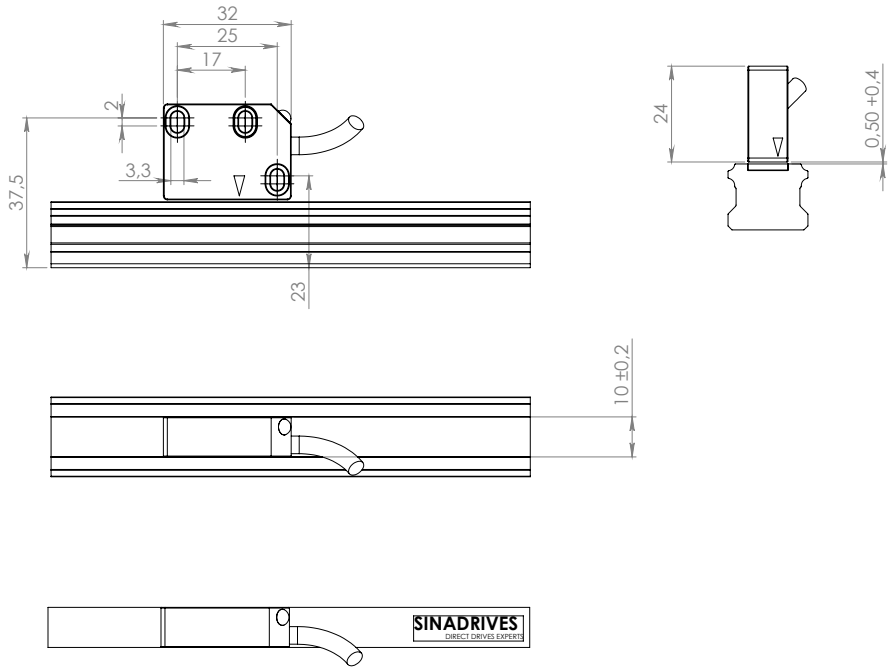
Magnetic encoders provide excellent performance in dusty and contaminated environments. Due to the greater tolerance between encoder and measuring tape, this encoder is particularly suitable for long measurements.

	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

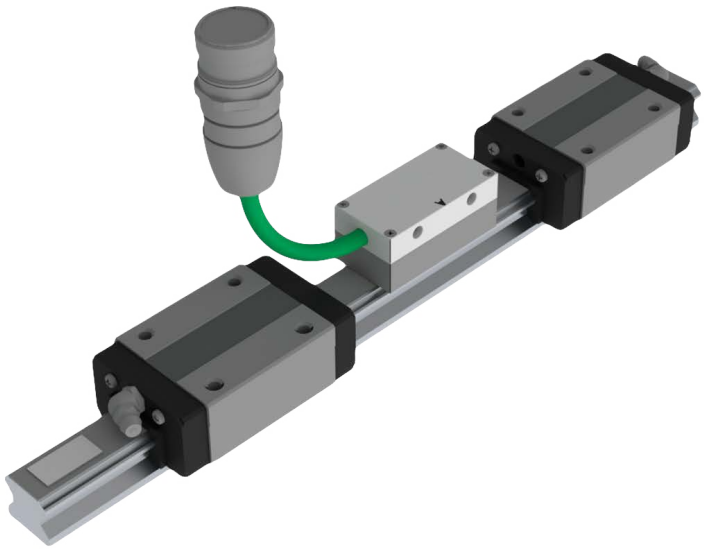
KEC00S - 0A INCREMENTAL ENCODER
TECHNICAL SPECIFICATIONS



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.

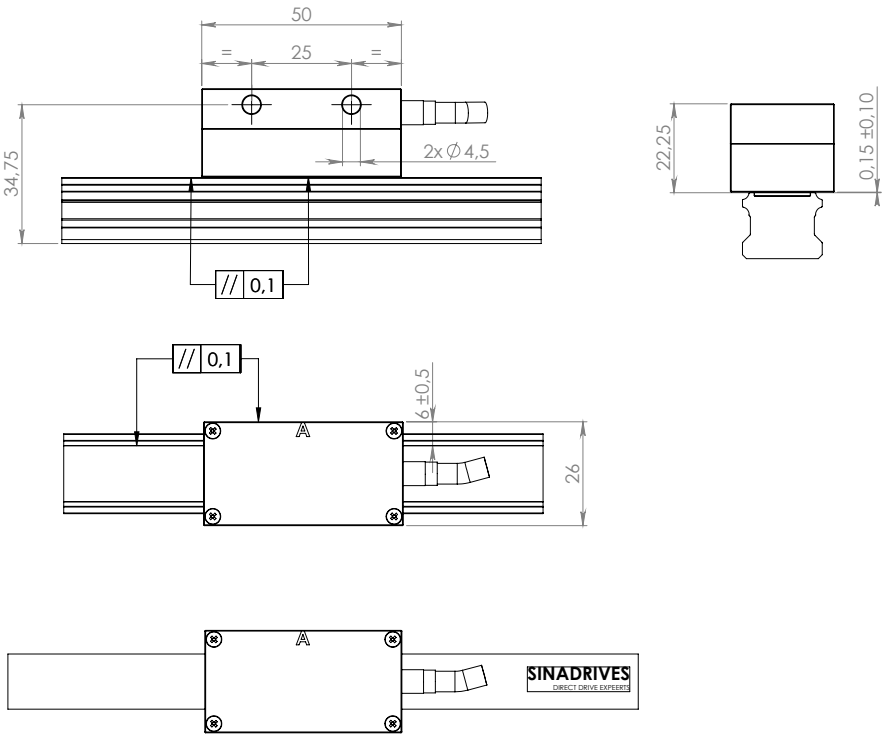
Magnetic measuring systems

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

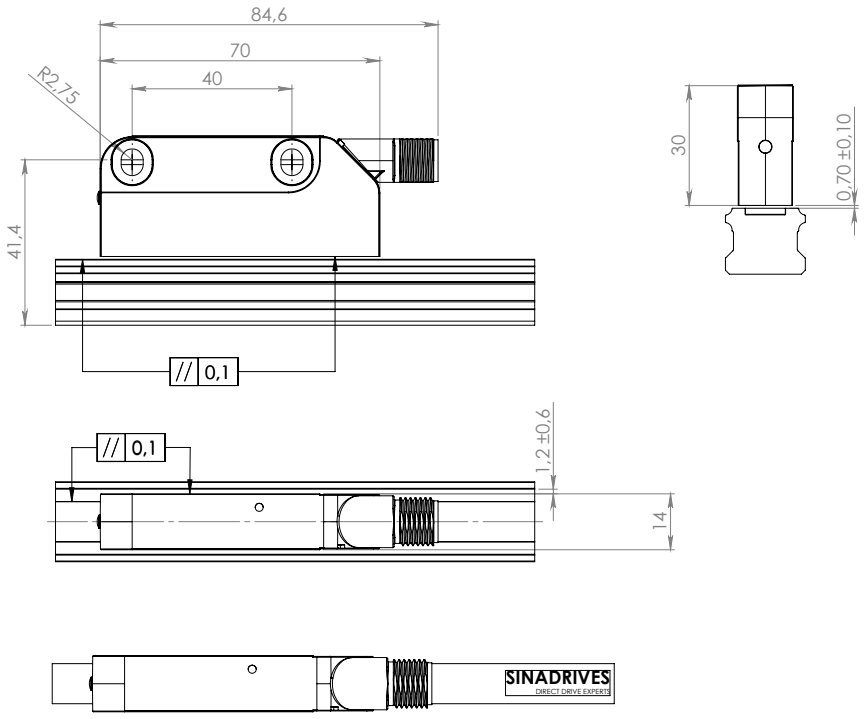
KEC03S - 3A INCREMENTAL ENCODER

TECHNICAL SPECIFICATIONS



KEC03S - 5S INCREMENTAL ENCODER

TECHNICAL SPECIFICATIONS



KEC
ORDER CODE

Type
KEC - Measuring systems read head.

KEC - □□□□□ - □□ - □□□

Encoder
□□

Technology:
0A - Inductive incremental
2R - Magnetic incremental
3A - Inductive absolute
5S - Magnetic absolute
XXXXX - Without encoder

□

Reading head output:
* Incremental:
0 - 1 Vpp
4 - TTL
* Absolute:
E - Endat 2.2
B - Biss/C
D - Drivecliq
F - Fanuc
H - Hiperface
L - DSL
M - Mitsubishi
P - Panasonic
S - SSI

□□

Measuring system:
4C - 40 µm
1U - 1 µm
2M - 2 mm
2H - 0,25 µm
1H - 0,1 µm
1S - 0,1 µm + Functional safety
1Y - 1 µm + Functional safety

Connectors
□□

Typ [2]:
00A - Side connector Y-TEC base
00M - Side connector AMP
00H - Stecker M12 Hiperface
01A - Side connector M23
04A - Cable with connector M23
05A - Cable without connector
06A - Cable with connector Y-TEC
42S - Side connectors SUB - D 9/2 (only for 2R)

Cable
□□□

Cable length in cm
Max. cable lenght 100 cm

[1] Total length of the tape measure
[2] On request

KER
ORDER CODE

Type
KER - Length measuring system scale

KER□□S - □□□□□

□□

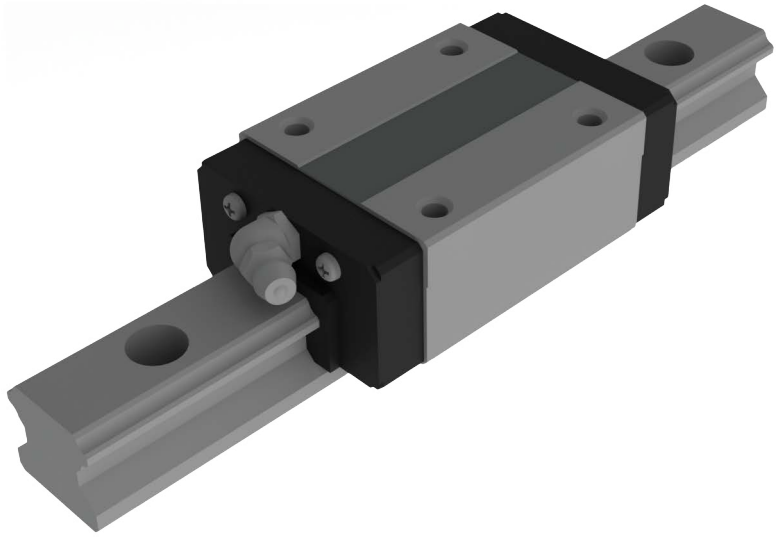
Encoder

Technology:
0A - Inductive incremental
2R - Magnetic incremental
3A - Inductive absolute
5S - Magnetic absolute

Total length of the tape measure (mm) [1)]

[1)] Total length of the tape measure
[2)] On request

HSV-R SERIES - LINEAR GUIDE
DIMENSIONS AND SPECIFICATIONS

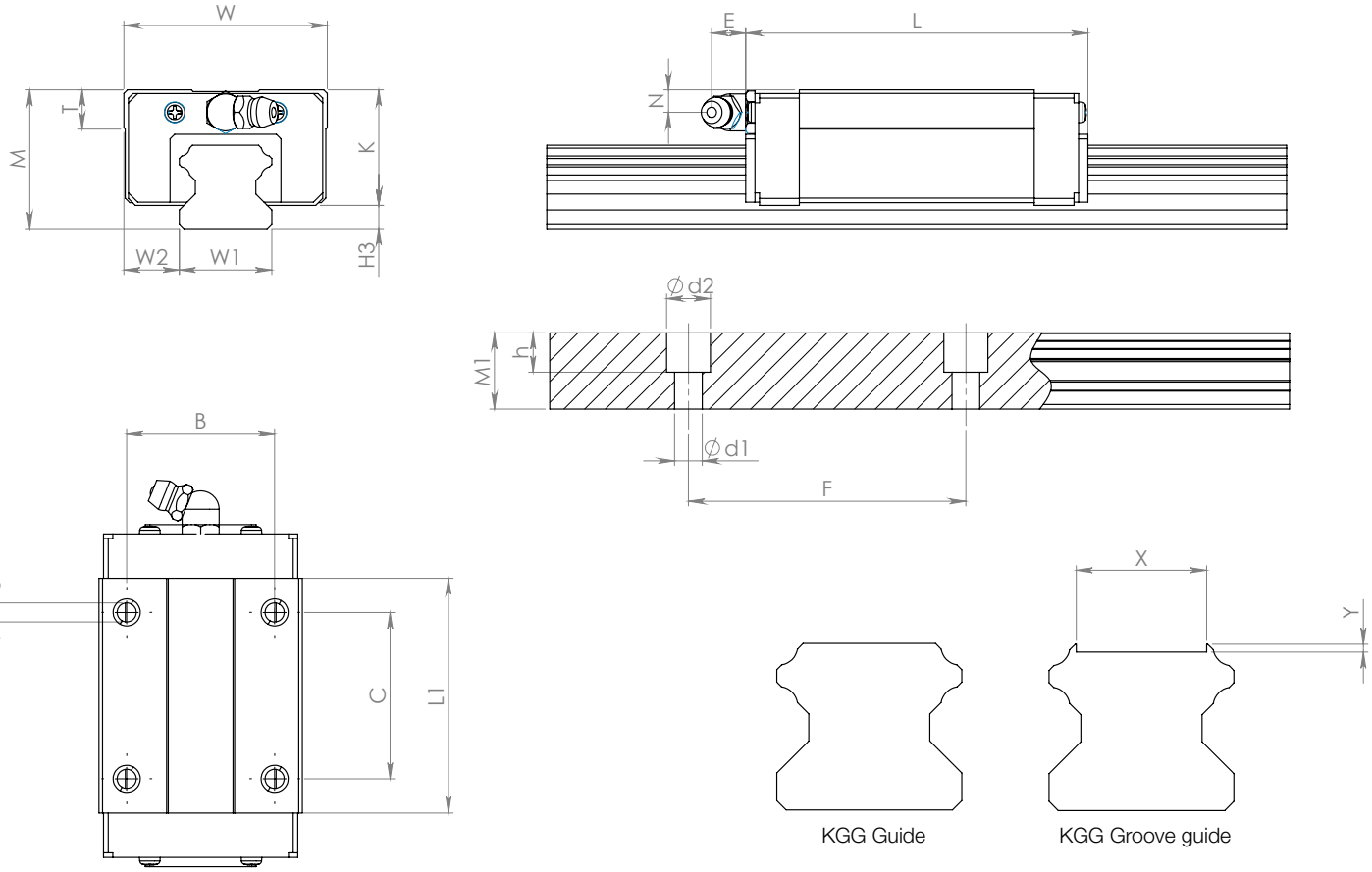


Model	Outer dimensions			Block dimensions										Basic load rating		Mass Kg	H_3
	Height M	Width W	Length L	W_2	B	C	Sx⌀	L_1	T	K	N	E	Grease nipple	C [kN]	C_0 [kN]		
HSV 15R	28	34	56.6	9.5	26	26	M4x5	38.8	6	23.8	8.3	5.5	PB1021B	8.33	13.5	0.18	4.2
HSV 20R	30	44	74	12	32	36	M5x6	50.8	8	25	5	12	B-M6F	13.8	23.8	0.25	5
HSV 25R	40	48	83.1	12.5	35	35	M6x8	59.5	9	33.5	10	12	B-M6F	19.9	34.4	0.54	6.5
HSV 30R	45	60	98	16	40	40	M8x10	70.4	9	37	10	12	B-M6F	28	46.8	0.9	8
HSV 35R	55	70	109.4	18	50	50	M8x12	80.4	12	45.6	15	12	B-M6F	37.3	61.1	1.5	9.4
HSV 45R	70	86	139	20.5	60	60	M10x17	98	15	58.5	20	16	B-R1/8	60	95.6	2.6	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_1xd_2xh	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	0.562	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

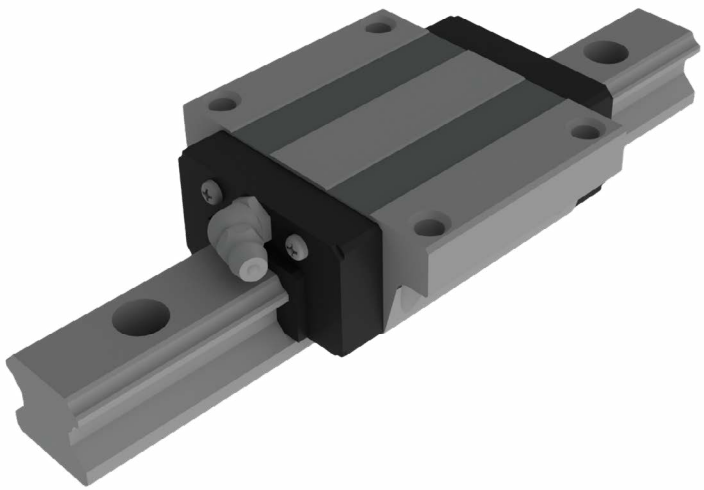


Groove dimensions

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

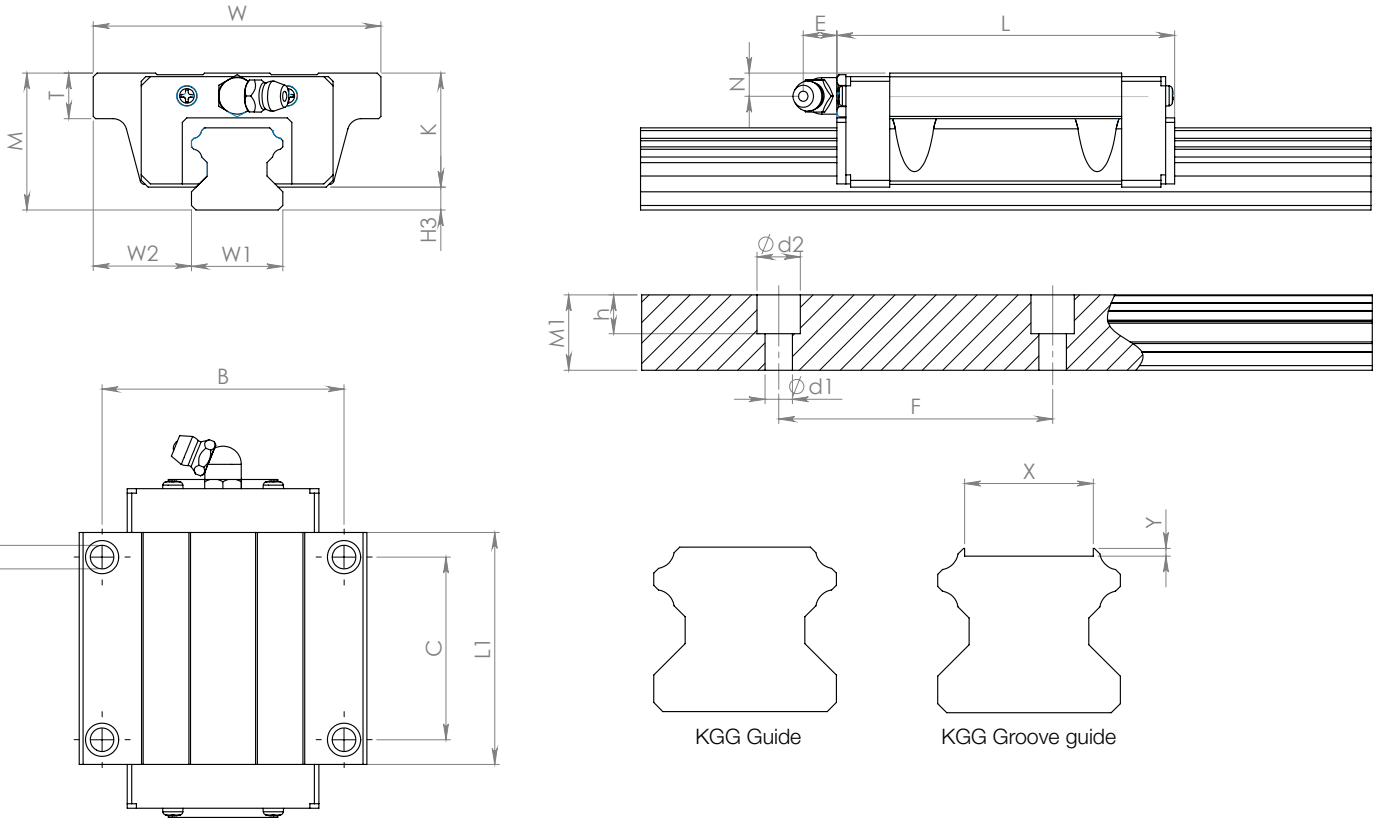


Model	Outer dimensions			Block dimensions									Basic load rating		H_3
	Height M	Width W	Length L	B	C	S	L_1	T	K	N	E	Grease nipple	C [kN]	C_0 [kN]	
HSV 15C	24	47	56.6	26	26	M5	38,8	6	23,8	8,3	5,5	PB1021B	8,33	13,5	4,2
HSV 20C	30	63	74	32	36	M6	50,8	8	25	5	12	B-M6F	13,8	23,8	5
HSV 25C	36	70	83.1	35	35	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_1xd_2xh	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

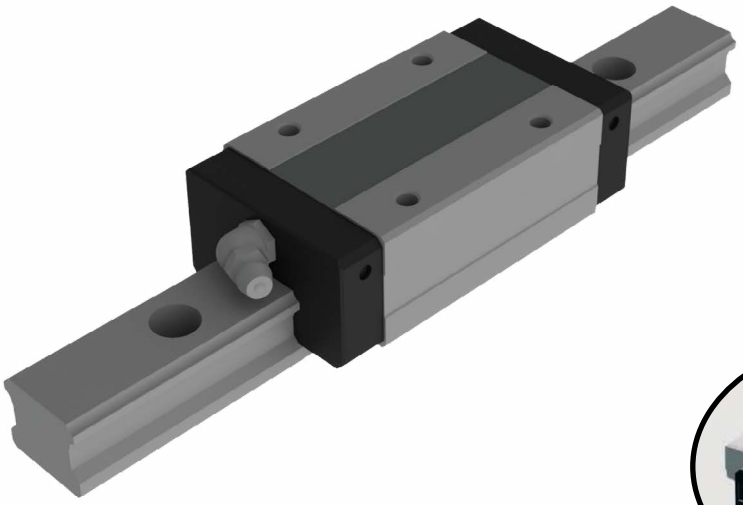
DIMENSIONS AND SPECIFICATIONS

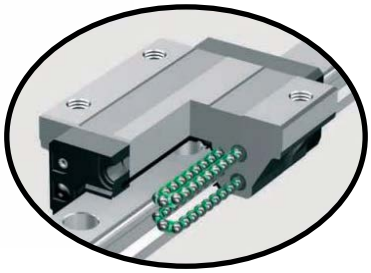


Groove dimensions

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





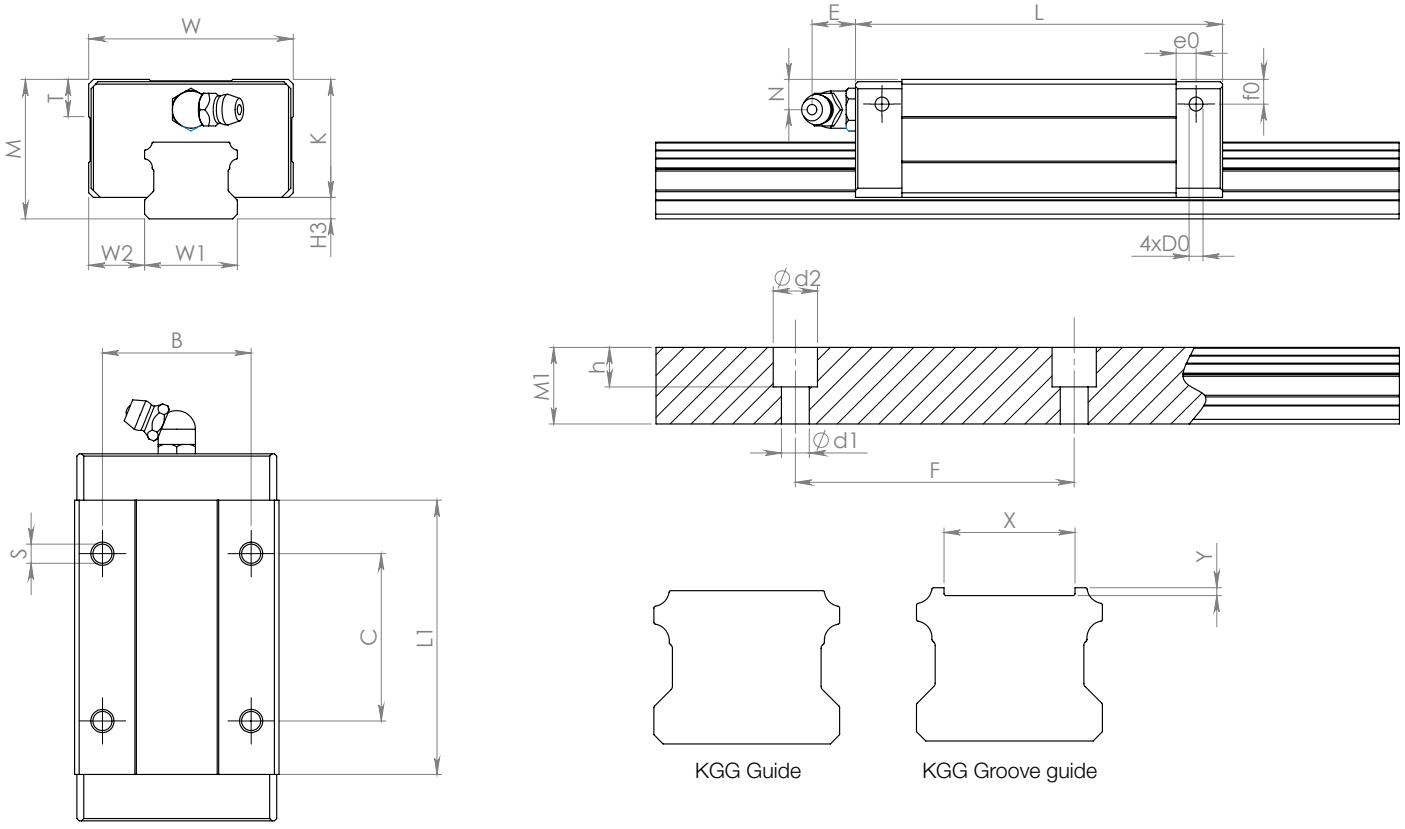
Ball bearing carriage

Model	Outer dimensions			Block dimensions									Pilot hole for side nipple			Basic load rating	
	Height M	Width W	Length L	B	C	S x ⌀	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][*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 15V	3	15	9.5	13	60	4.5x7.5x5.3	2500	0.175	0.898	0.175	0.898	0.16	0.19	1.3
SHS 20V	4.6	20	12	16.5	60	6x9.5x8.5	3000	0.334	1.75	0.334	1.75	0.361	0.35	2.3
SHS 25V	5.8	23	12.5	20	60	7x11x9	3000	0.566	2.75	0.566	2.75	0.563	0.54	3.2
SHS 30V	7	28	16	23	80	9x14x12	3000	0.786	4.08	0.786	4.08	0.865	0.94	4.5
SHS 35V	7.5	34	18	26	80	9x14x12	3000	1.38	6.76	1.38	6.76	1.53	1.4	6.2
SHS 45V	8.9	45	20.5	32	105	14x20x17	3090	2.05	10.1	2.05	10.1	2.68	2.54	10.4

SHS-V SERIES - LINEAR GUIDE

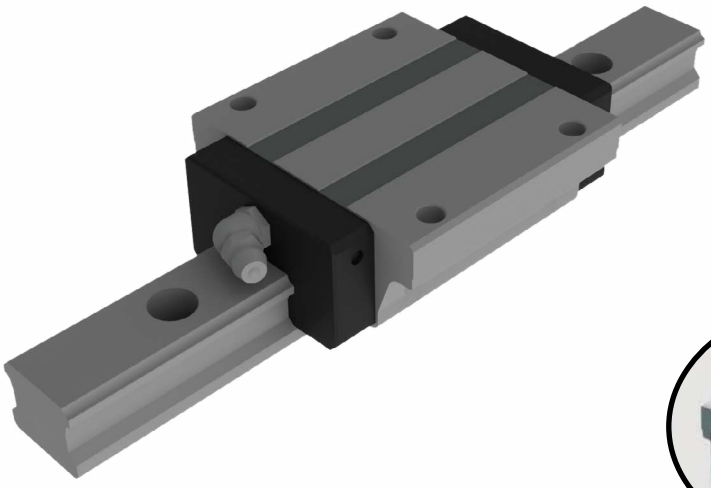
DIMENSIONS AND SPECIFICATIONS

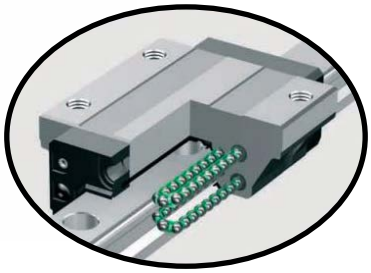


Groove dimensions

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

SHS-C SERIES - LINEAR GUIDE
DIMENSIONS AND SPECIFICATIONS





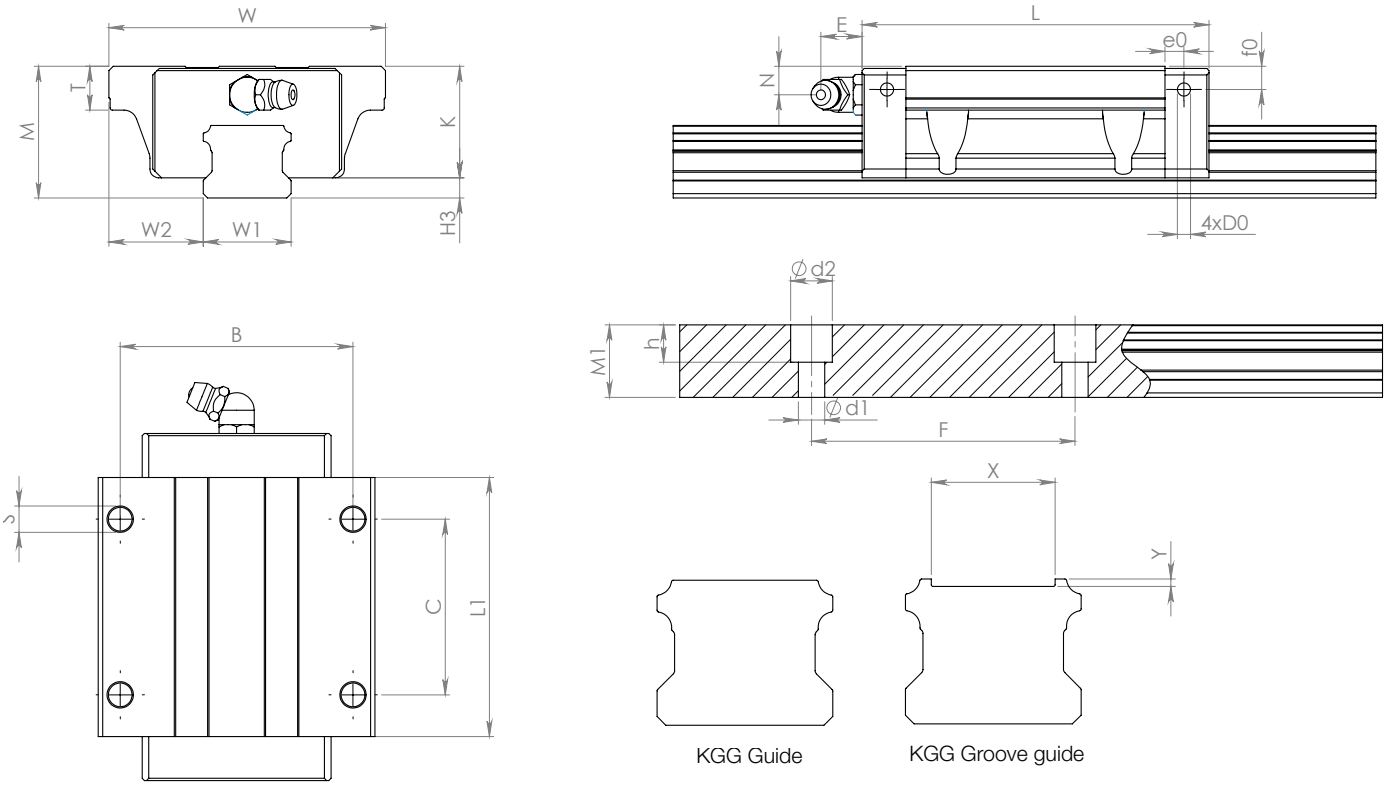
Ball bearing carriage

Model	Outer dimensions			Block dimensions										Pilot hole for side nipple			Basic load rating	
	Height M	Width W	Length L	B	C	S	H	L_1	T	T_1	K	N	E	Grease nipple	e_0	f_0	D_0	C [kN]	C_0 [kN]
SHS 15C	24	47	64,4	38	30	M5	4.4	48	5.9	8	21	5.5	5.5	PB1021B	4	4	3	14.2	24.2
SHS 20C	30	63	79	53	40	M6	5.4	59	7.2	10	25.4	6.5	12	B-M6F	4.3	5.3	3	22.3	38.4
SHS 25C	36	70	92	57	45	M8	6.8	71	9.1	12	30.2	7.5	12	B-M6F	6	5.5	3	31.7	52.4
SHS 30C	42	90	106	72	52	M10	8.5	80	11.5	15	35	8	12	B-M6F	5.5	6	5.2	44.8	66.6
SHS 35C	48	100	122	82	62	M10	8.5	93	11.5	15	40.5	8	12	B-M6F	6.5	5.5	5.2	62.3	96.6
SHS 45C	60	120	140	100	80	M12	10.5	106	14.1	18	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_1xd_2xh	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	2500	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 & KGF
ORDER CODE

Type
KG - Linear guide

KG□□□H - □□□ - □□□□□ - E1□□E2□□

□ Linear guide model
G - Linear guide without groove
F - Linearführung with groove

□□ Guide size
15 - Size 15
20 - Size 20
25 - Size 25
30 - Size 30
35 - Size 35
45 - Size 45

Serie
HSV - Serie HSV
SHS - Serie SHS

Carriage model
Length in mm

□□ E1 and E2
E1 in mm
E2 in mm

KGP
ORDER CODE

Type
KG - Guide carriage

KGP□□H - □□□ - □ - □□ - □□

□□

Guide Size
15 - Size 15
20 - Size 20
25 - Size 25
30 - Size 30
35 - Size 35
45 - Size 45

Serie
HSV - Serie HSV
SHS - Serie SHS

Block type
C
V
R

Preload
V1

Wiper
SS

SINADRIVES®
DIRECT DRIVE EXPERTS

www.sinadrives.com
info@sinadrives.com

SINADRIVES GmbH
Schumannstraße 27 | 60325 Frankfurt am Main | Germany
Tel. +49 (0) 69 505 027 470
info@sinadrives.com

SINADRIVES Spain / SAIN AUTOMATION SOLUTIONS S.L
Av. Mas Pins, 164 Nave 6
17457 Riudellots de la Selva - Girona | Spain
Tel. +34 972 442 452
info@sinadrives.com

Innovation & Excellence

Direct Drive technology
v.03.01.2025