

# MAGNETIC HOLDERS

## Types of magnetic holders

Product Name	Model	Application
Electromagnetic holder	KE-B·E(D)·R·K·V	Used for automation of press machines and shearing robots.
Permanent electromagnetic holder	KEP·KE-HA	
Permanent magnetic holder	KM	Imbedded in molds to hold various workpieces.

※Also refer the Facsimile Communication Form (inquiries data) at the end of this Catalog.

## Model KE-B ELECTRO MAGNETIC HOLDER

Used in automated manufacturing lines as the magnetic force can be turned on and off or increased or decreased by remote operation via a rectifier (to be installed additionally).

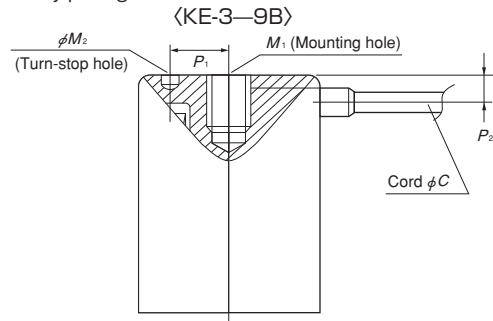


### [Application]

You can use these holders for a wide range of operations such as material feed for automatic press, prevention of deflection for shearing material, and various automatic processes, as well as the holding hands of industrial robots.

### [Features]

- Special cables that have specially high durability against bending and vibration are used. (Employed in all models except for KE-1B.)
- Electrical control can be used for turning on and off the magnetic force and for remote on/off control.
- Usable for continuous operation.
- Finished by plating.

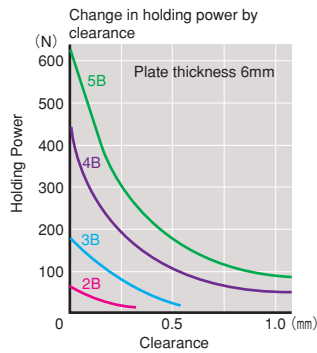
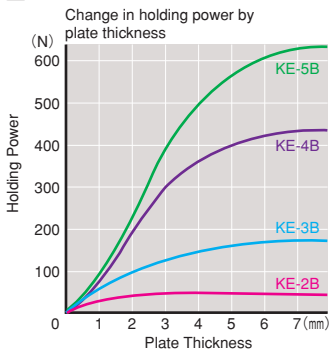


### Precaution for use

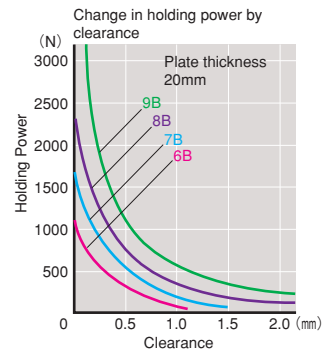
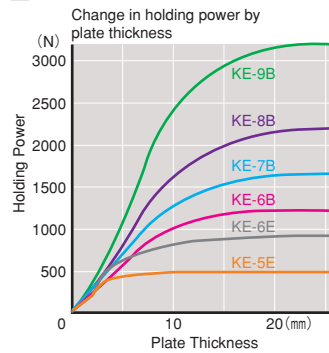
Rust and scratches on the attractive face affect the holding power adversely. Repair it periodically.

### Controller required additionally

#### KE-2B/3B/4B/5B



#### KE-5E/6E/6B/7B/8B/9B



Model	Dimensions	Max. Holding Power	Hole Dimensions			Power Cord		Voltage	Current	Working Rate	Applicable Rectifier	Mass
			M <sub>1</sub>	M <sub>2</sub>	P <sub>1</sub>	C	P <sub>2</sub>					
KE-1B	φ10 (0.39) × 30 (1.18)	8N (0.8kgf)	M4 (0.15) × 0.7 (0.02)	—	—	—	—	6 VDC	0.18A	100%	KR-T101A-6/24	15g/0.03 lb
KE-2B	φ20 (0.78) × 40 (1.57)	28N (2.8kgf)	Depth 6 (0.23)	—	—	7 (0.27)	8 (0.31)	24 VDC	0.07A		KR-T101A-6/24	60g/0.13 lb
KE-3B	φ30 (1.18) × 40 (1.57)	180N (18kgf)	M6 (0.23) × 1.0 (0.03)	φ4 (0.15) Depth 2 (0.07)	10 (0.39)	φ3.7 (0.14)	8 (0.31)	90 VDC	0.19A	ED	KR-T103A-24	150g/0.33 lb
KE-4B	φ40 (1.57) × 40 (1.57)	400N (40kgf)	Depth 12 (0.47)	φ4 (0.15) Depth 3 (0.11)	15 (0.59)	8.5 (0.33)	8 (0.31)		0.24A		RH-M102C-24	RH-M105B-24
KE-5B	φ50 (1.96) × 50 (1.96)	600N (60kgf)	M8 (0.31) × 1.25 (0.04)	φ5 (0.19) Depth 4 (0.15)	18 (0.70)	φ6.2 (0.24)	10 (0.39)	90 VDC	0.12A	ED	KR-N101A	560g/1.23 lb
KE-6B	φ60 (2.36) × 60 (2.36)	1100N (110kgf)	Depth 15 (0.59)	φ6 (0.23) Depth 6 (0.23)	20 (0.78)		12 (0.47)		0.19A		RH-M102C	1.0kg/2.20 lb
KE-7B	φ70 (2.75) × 60 (2.36)	1500N (150kgf)	M10 (0.39) × 1.5 (0.05)		φ6 (0.23) Depth 6 (0.23)	20 (0.78)	15 (0.59)	15 (0.59)	0.20A	RH-M105B	1.7kg/3.74 lb	
KE-8B	φ80 (3.15) × 60 (2.36)	2000N (200kgf)		0.26A					RH-M205B	2.2kg/4.85 lb		
KE-9B	φ90 (3.54) × 60 (2.36)	3300N (330kgf)	Depth 15 (0.59)				0.35A					

※B type: Cord length 0.3 m (11.8 inches) (0.25-m (9.8 inches) lead for KE-1B only)

1N≒0.1kgf

※The maximum holding power of models KE-1B to 4B applies to SS400, 10 mm (0.39,) thick, ground test piece held on the whole area and for KE-5B to 9B, applies to SS400, 20 mm (0.78,) thick, ground test piece held on the whole area.

※For KE-3B to 9B, a drip-proof type is also available.

# Model KE-D·E ELECTRO MAGNETIC HOLDER

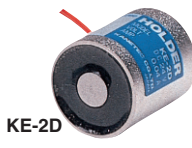


KE-4E

Controller required additionally



KE-3E



KE-2D

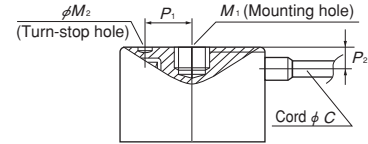
### [Application]

Thin type electromagnetic holders suitable for a robotic hand as they provide vertical motion in a certain range in limited space.

### [Features]

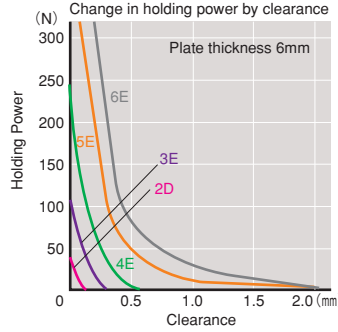
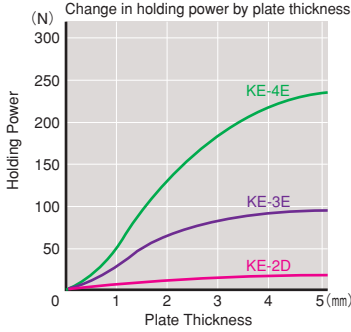
- Special cables that have specially high durability against bending and vibration are used. (Employed in all models except for KE-2D.)
- Usable for continuous operation.
- Finished by plating.

(KE-3—6E)



### Precaution for use

Rust and scratches on the attractive face affect the holding power adversely. Repair it periodically.



Model	Dimensions	Max. Holding Power	Hole Dimensions			Power Cord		Voltage	Current	Working Rate	Applicable Rectifier	Mass
			M <sub>1</sub>	M <sub>2</sub>	P <sub>1</sub>	C	P <sub>2</sub>					
KE-2D	φ20 (0.78) × 25 (0.98)	18N (1.8kgf)	M4 (0.15) × 0.7 (0.02) Depth 8 (0.31)	φ2.1 (0.08) Depth 2.5 (0.09)	7.5 (0.29)	—	—	24 VDC	0.04 A	ED	KR-T101-6/24 KR-T103-24	30g/0.06 lb
KE-3E	φ30 (1.18) × 25 (0.98)	80N (8kgf)	M6 (0.23) × 1.0 (0.03) Depth 12 (0.47)	φ4 (0.15) Depth 2 (0.07)	10 (0.39)	—	—	24 VDC	0.085A		RH-M102B-24 RH-M105A-24	100g/0.22 lb
KE-4E	φ40 (1.57) × 25 (0.98)	220N (22kgf)	M8 (0.31) × 1.25 (0.04) Depth 15 (0.59)	φ4 (0.15) Depth 2.5 (0.09)	15 (0.59)	φ3.7	8 (0.31)	90 VDC	0.12 A		KR-N101A KR-N103A	190g/0.42 lb
KE-5E	φ50 (1.96) × 30 (1.18)	490N (50kgf)	M8 (0.31) × 1.25 (0.04) Depth 15 (0.59)	φ5 (0.19) Depth 3 (0.11)	18 (0.70)	(0.14)	9.5 (0.37)	90 VDC	0.044A	P73	RH-M105B RH-M205B	380g/0.83 lb
KE-6E	φ60 (2.36) × 30 (1.18)	880N (90kgf)	M8 (0.31) × 1.25 (0.04) Depth 15 (0.59)	φ5 (0.19) Depth 4 (0.15)	20 (0.78)	—	11 (0.43)	90 VDC	0.065A		RH-M210B	500g/1.10 lb

※E type: Cord length 0.3 m (0.2-m lead for KE-2D only) ※The maximum holding power applies to SS400, 10-mm thick, ground-finished test piece held on the whole area. 1N≐0.1kgf

# Model KE-R ELECTRO MAGNETIC HOLDER

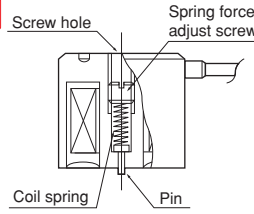
Chuck controller required additionally



KE-2R



KE-3RA



### [Application]

Small and light, for meeting uses in carrying press material which is not easily released by its own weight; also for holding hands of industrial robots.

### [Features]

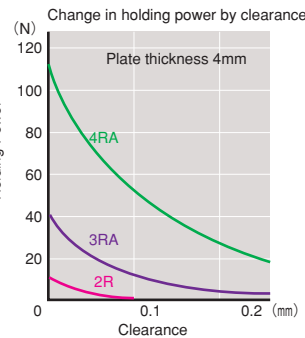
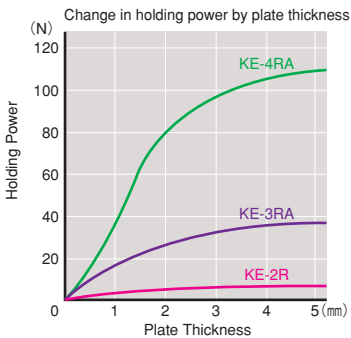
- Special cables that have specially high durability against bending and vibration are used. (Employed in all models except for KE-2R.)
- The workpiece is released quickly by the spring pressure of the projection at the center of the attractive face. The spring pressure can be adjusted according to workpiece situations.
- Electrical control such as a reverse exciting circuit is not necessary.
- Quick attach and detach enables speedy automation.
- Usable for continuous operation.
- Finished by plating.

※Use these holders for workpieces whose surface where the holder comes in contact is not rough. They are not suitable for thin plates that may be deformed by the pressing force.



### Precaution for use

Rust and scratches on the attractive face affect the holding power adversely. Repair it periodically.



Model	Dimensions	Max. Holding Power	Tapped Hole		Voltage	Current	Working Rate	Applicable Rectifier	Mass
			M <sub>1</sub>	M <sub>2</sub>					
KE-2R	φ20 (0.78) × 25 (0.98)	5N (0.5kgf)	M5 (0.19) × 0.8 (0.03)	Depth 5 (0.19)	24 VDC	0.04 A	100% ED	KR-T101-6/24 KR-T103-24	35g/0.07 lb
KE-3RA	φ30 (1.18) × 25 (0.98)	30N (3kgf)	M6 (0.23) × 1.0 (0.03)	Depth 6 (0.23)	24 VDC	0.085A		RH-M102B-24 RH-M105A-24	100g/0.22 lb
KE-4RA	φ40 (1.57) × 25 (0.98)	100N (10kgf)	M6 (0.23) × 1.0 (0.03)	Depth 7.5 (0.29)	24 VDC	0.12 A		RH-M105A-24	160g/0.35 lb

※Projection is provided at the center of attractive face with φ2 × max length 1mm for KE-2R & φ2.5 × max length 1mm for KE-3RA and 4RA.  
 ※If the pressing force cannot release the workpiece smoothly, use a rectifier enclosed in parentheses. ※RA type: Cord length 0.3 m (0.2-m lead for KE-2R only)  
 ※The maximum holding power applies to SS400, 10-mm thick, ground-finished test piece held on the whole area.

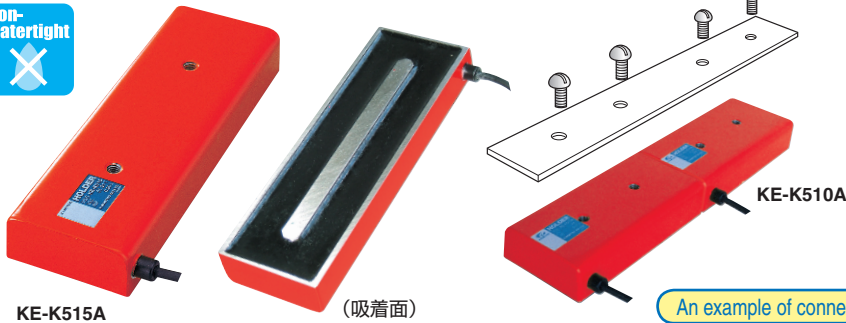
※Allowable temperature: The electromagnetic holders KE, permanent electro-magnetic holders KEP and hybrid holders KE-H must be used under the conditions of ambient temperature 40 °C or below and temperature of workpieces to hold 50 °C or below. For higher temperature, please contact us.  
 ※The holding power of KE-B, KE-E (D) and KE-RA (R) on various thickness of steel plates and the holding power relative to various gaps are as shown in the graphs.  
 ※The maximum holding power is the power that can be obtained under the most favorable conditions including materials, shapes and finishes of workpieces to hold. Thus, for practical use, choose a suitable model in consideration of a large drop in the holding power depending on situations. Generally, the lifting capacity drops to a half or below of the holding power obtained from the graphs. If you plan to use holders in particular situations such as for workpieces having holes and grooves on the attractive face to

disable the utilization of the whole area or where big acceleration (G) will be applied to workpieces to be held and transported, please contact us.  
 ※The electromagnetic holders when powered off still have residual magnetism. If the mass of the workpiece is greater than the residual holding power, the workpiece will come off, but if not, it is usually necessary to use a rectifier equipped with a reduction-of-magnetization function by reverse excitation, except for the holders equipped with the automatic release function.  
 ※The electromagnetic holders are not of waterproof construction. If waterproof holders are required, please contact us.  
 ※If you want to use an uninterruptible power supply for a rectifier for electromagnetic holders, please consult with us in advance.

ELECTROMAGNETIC CHUCKS  
 CHUCK CONTROLLERS  
 PERMANENT MAGNETIC CHUCKS  
 ELECTROMAGNETIC CHUCKS  
 BLOCKS FOR MC  
 VACUUM CHUCKS  
 PROMELTA SYSTEM  
 SINE BAR CHUCKS  
 MAGNETIC BLOCKS  
 WORKING TOOLS  
 MEASURING TOOL HOLDERS  
 MAGNETIC HOLDERS  
 MAGNETIC TOOLS

## Model KE-K PLATE TYPE MAGNETIC HOLDER

Controller required additionally



[Application]

Applicable for automatic working systems which lift workpieces in limited strokes and transport repeatedly in vertically narrow spaces. Also, applicable to a wide range of uses, from various automated equipment to industrial robot hands, as well as to feeding material in automatic presses and preventing warping in shearing material.

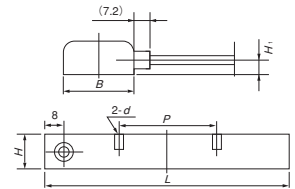
[Features]

- Usable for automatic operation.
- As thin as 15 to 20 mm yet powerful.

An example of connection for use

Model	Dimensions						Max. Holding Power	Voltage	Current	Operating Factor	Applicable Rectifier	Mass
	B	H	H <sub>i</sub>	L	P	d						
KE-K310A	30	15	6.5	100 (3.93)	40 (1.57)	M4 (0.15)	70N (7kgf)	24 VDC	0.11A	100%	KR-T101A-6/24 KR-T103A-24 RH-M102C-24 RH-M105B-24	0.2 kg/0.44 lb
KE-K315A	(1.18)	(0.59)	(0.25)	150 (5.90)	70 (2.75)	Depth 6 (0.23)	100N (10kgf)		0.20A		0.3 kg/0.66 lb	
KE-K510A	50	20	9.0	100 (3.93)	40 (1.57)	M6 (0.23)	180N (18kgf)		0.17A		0.45kg/0.99 lb	
KE-K515A	(1.96)	(0.78)	(0.35)	150 (3.93)	70 (2.75)	Depth 8 (0.31)	260N (26kgf)	0.30A	0.65kg/1.43 lb			

\*Max. holding power is as for 2mm thick steel plate. \*\*K type: Cord length 0.3 m



## Model KE-V ELECTRO MAGNETIC V HOLDER

Controller required additionally



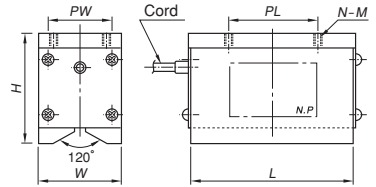
[Application]

These holders are suitable for transportation of small round bars and pipes in automated lines.



**Precautions for use**

Rust and scratches on the attractive face affect the holding power adversely. Repair it periodically.



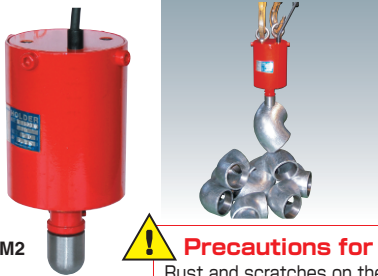
[mm (in)]

Model	Dimensions						Max. Holding Power [kgf]					Applicable Diameter	Voltage	Current	Operating Factor	Applicable Rectifier	Mass
	W	H	L	PW	PL	N	M	φ10	φ30	φ50	φ80						
KE-V306	30	50	60 (2.36)	-	30 (1.18)	-	M6 (0.23)	15 (0.59)	25 (0.98)	-	-	30 (1.18)	φ10 (0.39)	24	0.23A	RH-M102C-24 RH-M105B-24 KR-T101A-6/24 KR-T103A-24	0.6kg/1.32 lb
KE-V309			90 (3.54)		50 (1.96)		Depth 10	17 (0.66)	50 (1.96)			80 (3.14)					0.9kg/1.98 lb
KE-V312			120 (4.72)		70 (2.75)		2 (0.07)	20 (0.78)	75 (2.95)			130 (5.11)					1.1kg/2.42 lb
KE-V510	50	70	100 (3.93)	-	80 (3.15)	-	M8 (0.31)	80 (3.14)	120 (4.72)	-	-	180 (7.08)	φ26 (1.02)	90	0.14A	100% ED RH-M102C RH-M105B RH-M205B RH-M210B	2.2kg/4.85 lb
KE-V515			150 (5.90)		80 (3.15)		Depth 10	130 (5.11)	220 (8.66)			320 (12.5)					3.0kg/6.61 lb
KE-V520			200 (7.87)		80 (3.15) + 80 (3.15)		3 (0.11)	180 (7.08)	320 (12.5)			450 (17.7)					4.0kg/8.80 lb
KE-V815	75	100	150 (5.90)	50	80 (3.15)	-	M8 (0.31)	160 (6.29)	200 (7.87)	400 (15.7)	-	-	φ50 (1.96)	VDC	0.37A	KR-N101A KR-N103A	6.5kg/14.3 lb
KE-V823			225 (8.85)		80 (3.15)		4 (0.15)	300 (11.8)	100 (3.93)	700 (27.5)			10kg/22.0 lb				
KE-V830			300 (11.8)		80 (3.15) + 80 (3.15)		6 (0.23)	450 (17.7)	600 (23.6)	1000 (39.3)			13kg/28.6 lb				

\*V type: Cord length 0.3 m (11.8., approx) \*\*The maximum holding power applies to cold finished steel bars held on the whole area.

## Model KE-M STICK TYPE MAGNETIC HOLDER

Controller required additionally



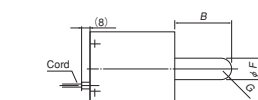
[Application]

Most suitable for automatic transfer and feeding of irregular shaped components such as castings mainly in automotive related manufacturers.

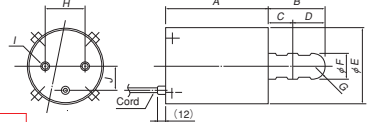
[Features]

These electromagnetic holders have a single long pole enabling it to lift parts that are randomly placed in buckets one by one by adjusting the voltage of the rectifier.

<KE-M1>



<KE-M2, M3>



**Precautions for use**

Rust and scratches on the attractive face affect the holding power adversely. Repair it periodically.

[mm (in)]

Model	Dimensions										Max. Holding Power	Voltage	Current	Operating Factor	Applicable Rectifier	Mass	
	A	B	C	D	E	F	G	H	I	J							
KE-M1	60 (2.36)	40 (1.57)	-	-	50.8 (2.00)	12 (0.47)	SR6 (0.23)	30 (1.18)	2 (0.07) - M6 (0.23)	15 (0.59)	20N (2kgf)	90 VDC	0.12A	50% ED	RH-M102C RH-M105B RH-M205B RH-M210B KR-N101A KR-N103A	0.8kg/1.76 lb	
KE-M2	100 (3.93)	55 (2.16)	25 (0.98)	30 (1.18)	76.3 (3.00)	25 (0.98)	SR12.5 (0.49)	50 (1.96)	2 (0.07) - M8 (0.31)	25 (0.98)	90N (9kgf)					0.33A	3.5kg/7.71 lb
KE-M3	160 (6.29)	80 (3.15)	30 (1.18)	50 (1.96)	114.3 (4.50)	35 (1.37)	SR17.5 (0.69)	80 (3.15)	2 (0.07) - M12 (0.47)	40 (1.57)	250N (25kgf)					0.77A	10kg/22.0 lb

\*\*50% ED (Effective Duty - Repeating cycle of power on 5 min. and pause 5 min.) \*\*M type: Cord length 0.3 m.

\*The maximum holding power applies to such usage that the tip is brought in contact with the flat surface of an SS400 block and pulled up vertically.

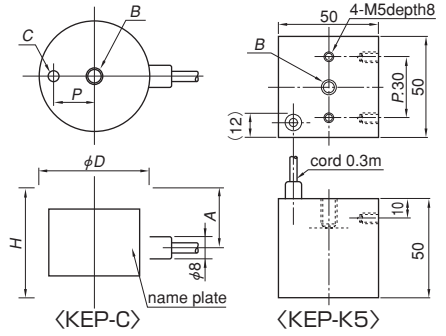
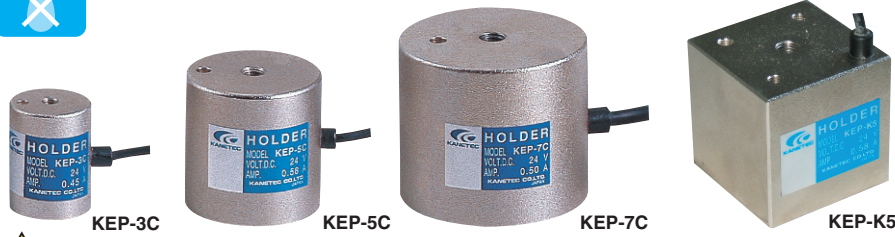


Model **KEP** MAGNETIC HOLDER



Electromagnet release type

Controller required additionally



**Precautions for use**  
Rust and scratches on the attractive face affect the holding power adversely. Repair it periodically.

- [Features]**
- Permanent magnetic holder for long time attraction without trouble of dropping due to power failure. It is turned ON/OFF with electric control.
  - Magnetic force turns OFF (releases) by power supply control and it is turned ON at all other times.
  - The interruptible power supply is not required.

**How to Use**

Power source is 24 VDC. When using 4 holders at the same time, connect their wires in series and use them with power of 96 VDC.

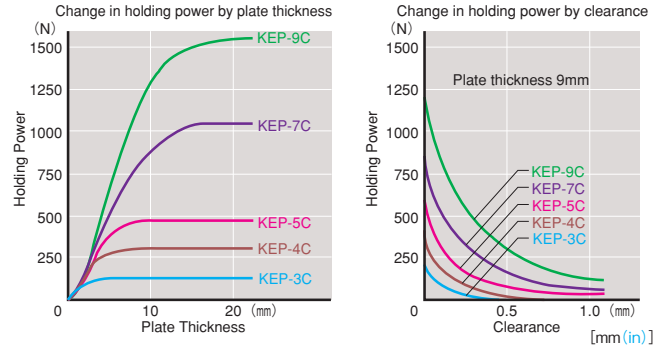
In this case, a voltage variable rectifier (e.g. KR-T205) enables adjustment of the demagnetizing voltage (power on amount at OFF) to facilitate operation.

**Release Only at Power Supply**

The power-on time must be 5 seconds or less. The power-off time must be 10 times or longer.

**Residual Magnetism**

As an inevitable nature of the permanent electromagnetic holder, 3 % to 4 % of the holding power will remain as residual holding power even when it is released. If the weight of the lifted workpiece is lighter than this holding power, it may not be released. In such a case, the workpiece can be released easily by attaching a thin nonmagnetic film on the attractive face. But, the holding power will drop in squared proportion.



Model	Dimensions						Max. Holding Power	Voltage	Current	Operating Factor	Applicable Rectifier	Mass
	φD	H	P	A	B	C						
KEP-3C	30 (1.18)	40	10 (0.39)	22	M6 (0.23) Depth 10	φ4 (0.15) Depth 3	150N ( 15kgf)	24 VDC	0.45A	10% ED	KR-T103A-24 KR-T101A-6/24	0.17kg/ 0.37 lb
KEP-4C	40 (1.57)	15	15 (0.59)	25	M8 (0.31) Depth 13	φ5 (0.19) Depth 4	250N ( 25kgf)		0.54A			0.31kg/ 0.68 lb
KEP-5C	50 (1.96)	50	18 (0.70)	25	M8 (0.31) Depth 13	φ5 (0.19) Depth 4	340N ( 35kgf)		0.58A			0.6 kg/ 1.32 lb
KEP-7C	70 (2.75)	60	20	35	M10 (0.39) Depth 16	φ6 (0.23) Depth 6	880N ( 90kgf)		0.50A			1.5 kg/ 3.30 lb
KEP-9C	90 (3.54)	90	20	35	M10 (0.39) Depth 16	φ6 (0.23) Depth 6	1470N (150kgf)		0.45A			2.4 kg/ 5.29 lb
KEP-K5	50(1.96)×50(1.96)×50(1.96)				M8D (0.31) epth13	—	250N ( 25kgf)		0.43A			50% ED

※ The maximum holding power applies to SS400, 20-mm thick, ground-finished test piece held on the whole area.  
※ Cord length 0.3 m.

Model **KE-H** HYBRID HOLDER

Controller required additionally



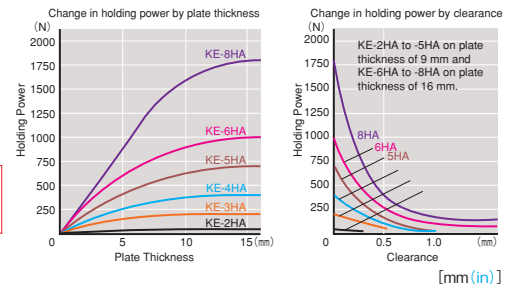
**Precautions for use**  
Rust and scratches on the attractive face affect the holding power adversely. Repair it periodically.

**[Application]**

Applicable to systems requiring high speed for robot hands and repeated transport operations in an automated line.

**[Features]**

- Very little residual holding power permits the speedy release of the workpiece. This enables high-speed operation, for example, an attaching / detaching cycle of 5 to 6 cycle/sec for a lightweight workpiece.
- Because it is a permanent electromagnetic type, the holder consumes little power and generates little heat, and thus is suitable for continuous, long period operation.
- The holding power is switchable to high, low and off according to normal supply, shutoff and reverse supply of power, respectively. This enables a wide variety of uses. (When at "low," the holding power is about 1/3 of that at "high.")
- Powerful rare earth magnet offers high holding power in spite of the small size of the holder.



Model	Dimensions	Max. Holding Power	Tapped Hole	Voltage	Current	Operating Factor	Applicable Rectifier	Mass
KE-2HA	φ20 (0.78) × 25 (0.98)	50N ( 5kgf)	M4 (0.15) × 0.7 (0.02) Depth 6 (0.23)	24 VDC	0.07A	100% ED	KR-H1005 RH-H102B	60g/ 0.13 lb
KE-3HA	φ30 (1.18) × 40 (1.57)	200N ( 20kgf)	M6 (0.23) × 1.0 (0.03) Depth 6 (0.23)		0.11A			140g/ 0.31 lb
KE-4HA	φ40 (1.57) × 40 (1.57)	400N ( 40kgf)	M8 (0.31) × 1.25 (0.04) Depth 10 (0.39)		0.15A			280g/ 0.61 lb
KE-5HA	φ50 (1.96) × 50 (1.96)	700N ( 70kgf)	M8 (0.31) × 1.25 (0.04) Depth 10 (0.39)		0.2 A			530g/ 1.17 lb
KE-6HA	φ60 (2.36) × 60 (2.36)	1000N (100kgf)	M10 (0.39) × 1.5 (0.05) Depth 10 (0.39)		0.22A			960g/ 2.11 lb
KE-8HA	φ80 (3.15) × 60 (2.36)	1800N (180kgf)	M10 (0.39) × 1.5 (0.05) Depth 10 (0.39)		0.28A			1.6kg/ 3.52 lb

※ For continuous high speed operations, a non-contact rectifier (RH-H102A) needs to be used.  
※ HA type: Cord length 0.3 m (0.2 m for KE-2HA only)  
※ The maximum holding power applies to SS400, ground test piece held on the whole area. Test piece thickness: 10 mm for KE-2HA~4HA and 20 mm for KE-5HA~8HA.

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VACUUM CHUCKS  
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MAGNETIC BLOCKS  
WORKING TOOLS  
MEASURING TOOL HOLDERS  
MAGNETIC HOLDERS  
MAGNETIC TOOLS



## Model KR RECTIFIER FOR HOLDER

Dedicated to electromagnetic/permanent electromagnetic holders

# Achieve up to 50 percent more compact!



KR-T101A-6/24

### [Application]

A standard type to rectify an input from an AC power source to DC and output it to electromagnetic holders.

### [Features]

- This model comes in various output voltages and output currents selectable according to required capacities.
- Compact design. It is also possible to set up in the control panel.
- As electric supply code is equipped as standard supply, it can be used only after it is connected to electro magnet.
- As terminal for controlling its outside is equipped as a standard supply, it can be respond to automatic operation.

[mm(in)]

Model	Input		Output		Dimensions			Reverse	Applicable Holder	Mass
	Voltage	Fuse	Voltage	Current	Width	Depth	Height			
KR-T101A-6/24	Single-phase 100 VAC	1A	6/24 DC	1A	155 (6.10)	140 (5.51)	95 (3.74)	—	KE-1B~4B KE-K310A*1 KE-2R~4RA	3kg/6.61 lb
KR-T103A-24		3A	24 VDC	3A	170 (6.69)	160 (6.29)	115 (4.52)	—		
KR-N101A		1A	90 VDC	1A	100 (3.93)	106 (4.17)	77 (3.03)	—	KE-5B~9B KE-M	1kg/2.20 lb
KR-N103A		3A		3A				—		

\*1...The rectifier for KE-1B is KR-T101-6/24A only. The rectifiers for KEP-3C~9C are KR-T101-6/24 and KR-T103-24 only. (consult your Kanetec dealer if there are questions)

## Model RH-M HIGH-SPEED CONTROLLER

Dedicated to electromagnetic holders



RH-M102C

### [Application]

These are important, breakthrough products that can make standard electromagnetic holders respond to higher speed work handling by robot hands, etc.

### [Features]

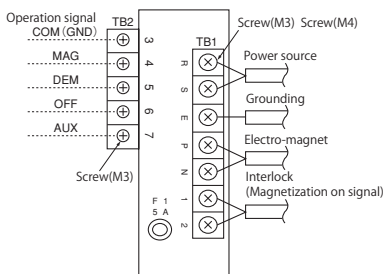
- The residual holding power, a factor to delay workpiece attaching and detaching, can be eliminated quickly to speed up the lines that use standard electromagnetic holders. (The demagnetizing time may become longer depending on materials of workpieces.)
- External operation is possible.
- It can be used to attract and transport one iron plate only from stacked ones by voltage adjustment or to take one piece of part only from several pieces in a bucket, e.t.c.

[mm(in)]

Model	Input		Output		Dimensions			Demagne Function	Applicable Holder	Mass			
	Voltage	Fuse	Voltage	Current	Width	Depth	Height						
RH-M102C-24	Single-phase 100 VAC ±10% 50/60Hz		DC	2A	145 (5.70)	175 (6.88)	260 (10.2)	Provided	24V	KE-2B~4B KE-2D~4E KE-KA KE-V306~312 KE-2R~4RA	4.3kg/9.48 lb		
RH-M102C			DC									0~90V	90V
RH-M105B-24			DC	0~24V					5A	170 (6.69)	24V	KE-2B~4B KE-2D~4E KE-KA KE-V306~312 KE-2R~4RA	4.5kg/9.92 lb
RH-M105B			DC	0~90V									
RH-M205B	Single-phase 200 VAC ±10% 50/60Hz		DC	10A	282 (11.1)	290 (11.4)							
RH-M210B	DC	0~90V											6.0kg/13.2 lb

\*1...The rectifier for KE-1B is KR-T101-6/24A only. The rectifiers for KEP-3C~9C are KR-T101-6/24 and KR-T103-24 only. (consult your Kanetec dealer if there are questions)

### Terminal wiring drawing



Connect operating signals to the terminal TB2. Connect the dry "a" contact of a relay or switch to be provided by the customer to between the terminal ③(COM) and each of the operating terminal ①~④.

For all operating signals, use a one shot no voltage "a" contact signal, approx.100 ms (standard).

### ! Precautions for use

- The rectifier KR Series and RH Series use electronic PC boards and small relays inside the rectifiers and therefore, are not suitable for use, for example, on cranes where they are subjected to vibrations constantly. For installation in places that are subjected to constant vibrations, anti-vibration measures need to be taken. The RH Series external signal input wires must be shielding wires and must be limited to 10 m long maximum.
- With regard to failures due to use of holders made by other manufacturers, we may not be able to answer technical questions. Such use also voids the warranty even if a failure occurs within the warranty period.

Model **KR-H** RECTIFIER FOR HYBRID HOLDER



KR-H1015

[Application]

Rectifiers dedicated to hybrid holders.

- KR-H1005/1015 (Relay contact type)  
For less frequent operations (ON/OFF about once per minute).
- RH-H102A (Non-contact type)  
For frequent operations.

Model	Input	Output	Dimensions	Applicable Holder	Mass
KR-H1005	100 VAC 50/60Hz Single-phase	24 VDC 0.5A	145 (5.70) × 100 (3.93) × 210 (8.26)	KE-2HA—8HA	1.7kg/3.74 lb
KR-H1015		24 VDC 1.5A			2.0kg/4.40 lb
RH-H102B		24 VDC 2.0A			4.3kg/9.48 lb

※External control terminals included.

Electromagnetic Holders and Applicable Rectifiers and Number of Controllable Holders

All holders connected in parallel.

Electromagnetic holders KE-B Series

(Unit: pcs)

整流器	ホルダ	KE-1B	KE-2B	KE-3B	KE-4B	KE-5B	KE-6B	KE-7B	KE-8B	KE-9B
KR-T101A-6 / 24	KR-T101A-6 / 24	4	11	4	3	-	-	-	-	-
	KR-T103A-24		34	12	10					
	RH-M102C-24		25	9	7					
	RH-M105B-24		64	23	18					
KR-N101A	KR-N101A	-	-	-	-	6	4	4	3	2
	KR-N103A					20	12	12	9	7
	RH-M102C					15	9	9	6	5
	RH-M105B					37	23	22	17	12

Thin electromagnetic holder KE-D / E Series

整流器	ホルダ	KE-2D	KE-3E	KE-4E	KE-5E	KE-6E
KR-T101A-6 / 24	KR-T101A-6 / 24	20	9	6	-	-
	KR-T103A-24	60	28	20		
	RH-M102C-24	45	21	15		
	RH-M105B-24	112	52	37		
KR-N101A	KR-N101A	-	-	-	18	12
	KR-N103A				54	36
	RH-M102C				40	27
	RH-M105B				102	69

Automatic release type electromagnetic holder KE-R Series

整流器	ホルダ	KE-2R	KE-3RA	KE-4RA
KR-T101A-6 / 24	KR-T101A-6 / 24	20	9	6
	KR-T103A-24	60	28	20
	RH-M102C-24	45	21	15
	RH-M105B-24	112	52	37

Calculation of controllable pieces

Number of controllable units = Output current of rectifier / Current of electromagnetic holder × approx. 0.8 (omit figures below decimal point)

※“X0.9” for RH-M and RH-H.

(Example) In case of KR-N101-6/24 and KE-2B;  
1/0.07kw×0.8(Value 11.428...thus 11)  
Number of unit = 11

Rectangular electromagnetic holder KE-K Series

整流器	ホルダ	KE-K310A	KE-K315A	KE-K510A	KE-K515A
KR-T101A-6 / 24	KR-T101A-6 / 24	7	4	4	2
	KR-T103A-24	21	12	14	8
	RH-M102C-24	16	9	10	6
	RH-M105B-24	40	22	26	15

Permanent electromagnetic holder KEP-C Series

整流器	ホルダ	KEP-3C	KEP-4C	KEP-5C	KEP-7C	KEP-9C	KEP-K5
KR-T101A-6 / 24	KR-T101A-6 / 24	1	1	1	1	1	1
	KR-T103A-24	5	4	4	4	5	5

Hybrid holder KE-HA Series

整流器	ホルダ	KE-2HA	KE-3HA	KE-4HA	KE-5HA	KE-6HA	KE-8HA
KR-H1005	KR-H1005	6	4	3	2	2	1
	KR-H1015	19	12	9	6	6	4
	RH-H102B	25	16	12	9	8	6

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## Model KM MAGNETIC HOLDER

### List of Magnetic Holders

Dimensions	Height	OD "h" Tolerance	Plating	Painting	Peripheral Knurling	Stainless steel design	Heat-resisting design
φ 5	× 8	KM-0005					
	× 13		KM-0005L				
φ 7	× 8	KM-0007					
	× 13		KM-0007L				
φ 10	× 8		KM-0010H		KM-0010J	KM-0010H-SUS	
	× 15	KM-H001	KM-001				
	× 18		KM-T001				
φ 15	× 15	KM-H0015	KM-0015				
	× 18		KM-T0015				
φ 18	× 8		KM-0018H		KM-0018J	KM-0018H-SUS	
φ 20	× 15	KM-H002	KM-002				
	× 18		KM-T002				
φ 25	× 10		KM-0025H		KM-0025J	KM-0025H-SUS	
	× 25	KM-H0025		KM-025C			
φ 26	× 30		KM-T0025				
	× 25			KM-03C			
φ 30	× 33		KM-T003				
	× 30			KM-04C			KM-T004T
φ 50	× 40			KM-05C			KM-T005T
26 × 26	× 25			KM-025S			
26 × 60	× 25			KM-06S			

### [Application]

Can be used to hold down drawings, rules and paper patterns.

The models with tapped holes on the back can be used widely by installing them on jigs.

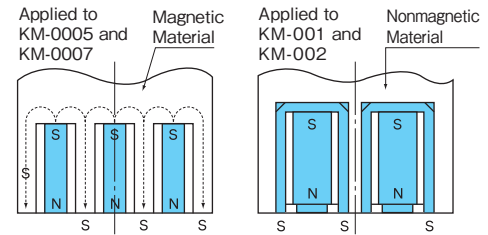
Can be incorporated in press dies.

Can hold workpieces during wire cutting.

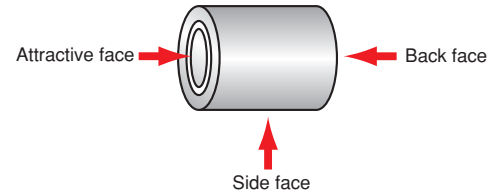
### [Features]

- Four specifications, OD tolerance, plating, painting and peripheral knurling, are available for selection according to applications.
- When suitable OD "h" tolerances are selected, they can be incorporated in dies.
- When tapped holes are made on the back, they can be used in various applications.

### Jig Application Example



### Names of Faces



### Upper Limit of Working Temperature

The holding power drops as body temperature rises. The following types are available. It returns to be recovered when temperature drops to normal temperature.

#### ■ Type A

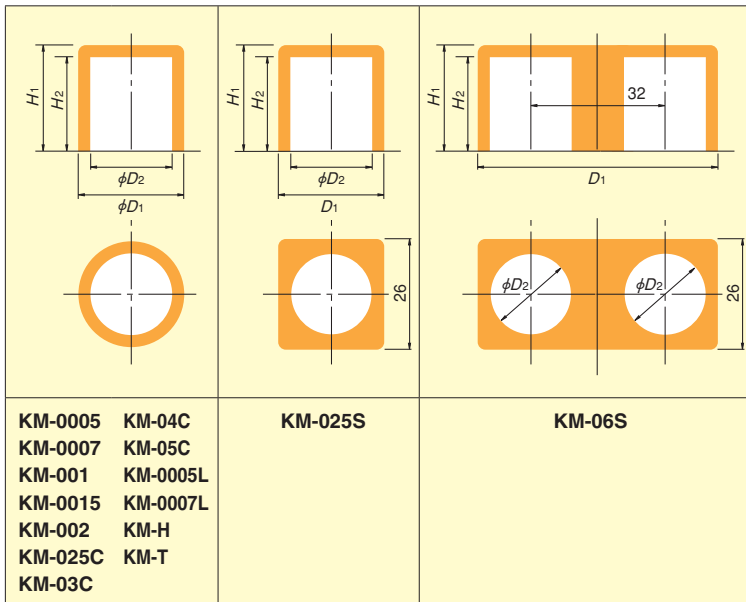
Superior in terms of temperature. The holding power as high as 85% can be maintained at 350°C assuming the holding power at 20°C is 100%. It can be used up to 400°C intermittently for a short period of time.

#### ■ Type B

The holding power drops to about 95% at 100°C and to about 85% at 200°C assuming the holding power at 20°C is 100%. For continuous use, the upper limit is 150°C and for intermittent use for a short period of time, it may be used up to 200°C.

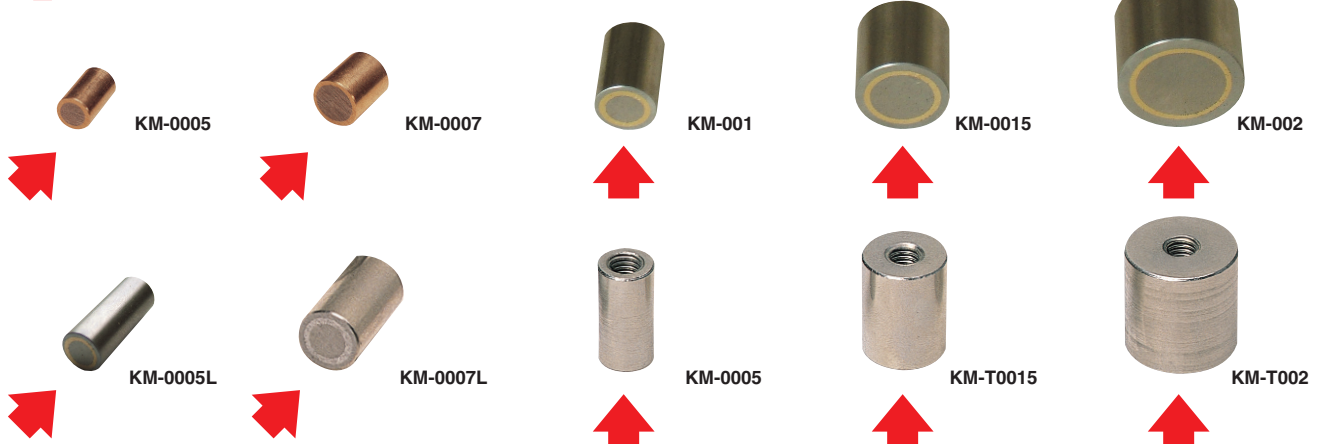
#### ■ Type C

The holding power drops to about 85% at 50°C and to about 70% at 100°C assuming the holding power at 20°C is 100%. The upper limit for continuous use is 100°C.



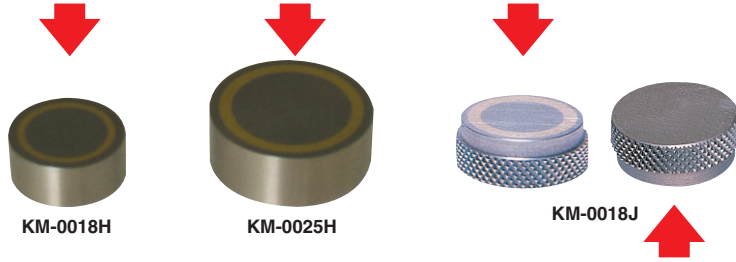
※ The attractive force can be reduced depending on machining. Please machine minimum possible, as the negative machining especially towards diameter is large to attractive force.

↑ Arrows indicate the attractive face.

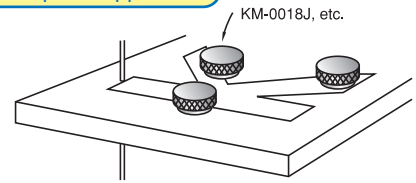




↑ Arrows indicate the attractive face.



An example of application



These holders can be used to hold pieces cut out by a wire to prevent such pieces from affecting the remaining parts or from falling.

## OD "h" Tolerance

[mm (in.)]

Model	Dimensions			Holding Power	Surface Treatment	Tapped Hole	Machinable Lange				Max. Temperature	Tapping	Mass		
	OD × Height	"h" Tolerance	Height Tolerance				D <sub>1</sub>	D <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>					
KM-0005	φ5 (0.19)h7 (0.27) × 8 (0.31)	$-\frac{0}{-0.012}$	None	0.3N (0.03kgf)	None	None	5 (0.19)	4.5 (0.17)	8	7	Type B	Not possible	1.5g/0.003 lb		
KM-0007	φ7 (0.27)h7 (0.27) × 8 (0.31)	$-\frac{0}{-0.015}$		0.4N (0.03kgf)			7 (0.27)	6.5 (0.25)					(0.31)	(0.27)	2.5g/0.005 lb
KM-H001	φ10 (0.39)h9 (0.35) × 15 (0.59)	$-\frac{0}{-0.036}$	8N (0.8kgf)	10 (0.39)			9.5 (0.37)	15	12	Type A			Prepared hole up to 3.0 deep possible on the back	11g/0.024 lb	
KM-H001S	φ15 (0.59)h9 (0.35) × 15 (0.59)	$-\frac{0}{-0.043}$	20N (2kgf)	15 (0.59)			14 (0.55)							(0.59)	(0.47)
KM-H002	φ20 (0.78)h9 (0.35) × 15 (0.59)	$-\frac{0}{-0.052}$	40N (4kgf)	20 (0.78)			18 (0.70)	25	21					Prepared hole up to 4.0 deep possible on the back	40g/0.088 lb
KM-H002S	φ26 (1.02)h9 (0.35) × 25 (0.98)	$-\frac{0}{-0.052}$	100N (10kgf)	26 (1.02)			24 (0.94)								(0.98)

※The holding power applies to SS400, thickness 10mm and ground surface.

## Plating

[mm (in.)]

Model	OD × Height	Holding Power	Surface Treatment	Tapped Hole	Machinable Lange				Max. Temperature	Tapping	Mass	
					D <sub>1</sub>	D <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>				
KM-0005L	φ5 (0.19) × 13 (0.51)	1.8N (0.18kgf)	Nickel plating	None	5 (0.19)	4.5 (0.17)	13 (0.51)	10 (0.39)	Type A	Not possible	2.5g/0.005 lb	
KM-0007L	φ7 (0.27) × 13 (0.51)	4N (0.4kgf)			7 (0.27)	6.5 (0.25)					Type B	5g/0.011 lb
KM-0010H	φ10 (0.39) × 8 (0.31)	3N (0.3kgf)			—	—						
KM-001	φ10 (0.39) × 15 (0.59)	8N (0.8kgf)		10 (0.39)	9.5 (0.37)	12 (0.47)	Provided	12g/0.026 lb				
KM-T001	φ10 (0.39) × 18 (0.70)			—	—			Type A	Prepared hole up to 3.0 deep possible on the back	20g/0.044 lb		
KM-0015	φ15 (0.59) × 15 (0.59)	20N (2kgf)		15 (0.59)	14 (0.55)	18 (0.70)	Provided			23g/0.051 lb		
KM-T001S	φ15 (0.59) × 18 (0.70)			—	—			Type B	Not possible	16g/0.035 lb		
KM-0018H	φ18 (0.70) × 8 (0.31)	50N (5kgf)		20 (0.78)	18 (0.70)	12 (0.47)	Type A			Prepared hole up to 3.0 deep possible on the back	40g/0.088 lb	
KM-002	φ20 (0.78) × 15 (0.59)	40N (4kgf)		—	—			18 (0.70)	Type B		Not possible	45g/0.100 lb
KM-T002	φ20 (0.78) × 18 (0.70)			—	—	Type A	Provided			40g/0.088 lb		
KM-0025H	φ25 (0.98) × 10 (0.39)	90N (9kgf)		—	—			—	Type B	Not possible	40g/0.088 lb	
KM-T002S	φ26 (1.02) × 30 (1.18)	100N (10kgf)		M6 (0.23) Depth 10 (0.39) ビツチ1.0 (0.03)	26 (1.02)	24 (0.94)	30 (1.18)				21 (0.82)	120g/0.266 lb
KM-T003	φ30 (1.18) × 33 (1.29)	150N (15kgf)		M6 (0.23) Depth 8 (0.31) ビツチ1.0 (0.03)	30 (1.18)	27 (1.06)	33 (1.29)	28 (1.10)	180g/0.400 lb			

※The holding power applies to SS400, thickness 10mm and ground surface.

## Peripheral knurling

[mm (in.)]

Model	OD × Height	Holding Power	Facial Treatment	Tapped Hole	Max. Temperature	Features	Mass
KM-0010J	φ 10 (0.39) × 8 (0.31)	3N (0.3kgf)	Nickel plating	None	Type B	Peripheral knurling	5g/0.011 lb
KM-0018J	φ 18 (0.70) × 8 (0.31)	50N (5kgf)					16g/0.035 lb
KM-0025J	φ 25 (0.98) × 10 (0.39)	90N (9kgf)					40g/0.088 lb

※The holding power applies to SS400, thickness 10mm and ground surface.

## Industry first!! Stainless steel design, resists rust.

↑ Arrows indicate the attractive face.



Comparison in pure water left : made of stainless

Machining is possible up to 0.5mm on attractive face side.

## Stainless steel design

[mm (in.)]

Model	OD × Height	Holding Power	Facial Treatment	Tapped Hole	Max. Temperature	Tapped Hole	Mass
KM-0010H-SUS	φ 10 (0.39) × 8 (0.31)	3N (0.3kgf)	None	None	Type B	Not possible	5g/0.011 lb
KM-0018H-SUS	φ 18 (0.70) × 8 (0.31)	50N (5kgf)					16g/0.035 lb
KM-0025H-SUS	φ 25 (0.98) × 10 (0.39)	90N (9kgf)					38g/0.083 lb

※The holding power applies to SS400, thickness 10mm and ground surface.

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 MAGNETIC HOLDERS  
 MAGNETIC TOOLS

## Model KM MAGNETIC HOLDER



### Painting

Model	OD × Height	Holding Power	Facial Treatment	Tapped Hole	Machinable Lange				Max. Temperature	Tapping	Mass
					D <sub>1</sub>	D <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>			
KM-025C	φ26 (1.02) × 25 (0.98)	100N (10kgf)	Painting	M6 (0.23) , depth 8 (0.31)	26 (1.02)	25 (0.98)	25 (0.98)	17 (0.66)	Provided	90g/0.19 lb	
KM-03C	φ30 (1.18) × 25 (0.98)	150N (15kgf)		M6 (0.23) , depth 8 (0.31)	30 (1.18)	27 (1.06)	25 (0.98)	17 (0.66)		121g/0.26 lb	
KM-04C	φ40 (1.57) × 30 (1.18)	300N (30kgf)		M8 (0.31) , depth 12 (0.47)	40 (1.57)	36 (1.41)	30 (1.18)	20 (0.78)		260g/0.57 lb	
KM-05C	φ50 (1.96) × 40 (1.57)	500N (50kgf)		M8 (0.31) , depth 12 (0.47)	50 (1.96)	46 (1.81)	40 (1.57)	25 (0.98)	545g/1.20 lb		
KM-025S	26 (1.02) × 26 (1.02) × 25 (0.98)	100N (10kgf)		None	26 (1.02)	25 (0.98)	25 (0.98)	15 (0.59)	Prepared hole up to 3.0 deep possible on the back	118g/0.26 lb	
KM-06S	26 (1.02) × 60 (2.36) × 25 (0.98)	200N (20kgf)	M6 (0.23) , depth 10 (0.39)	60 (2.36)				Provided	275g/0.60 lb		

※The holding power applies to SS400, thickness 10mm and ground surface.

## Model KM-T-T HEAT-RESISTING MAGNETIC HOLDER

↑ Upper red arrow indicates attractive force.

### Announcing a new heat resistant type permanent magnetic holder.

#### [Application]

It is suitable to be used as Fixing Jig for such working site as in ship building or welding where heat is generated. In addition, it can be used to fix drawing, scale, small parts.

#### [Features]

- Heat resistance specifications up to 350°C to use.
- Screw holes are provided on its rear face and can be used widely by assembled with jig.



Model	OD×Height	Holding Power	Facial Treatment	Tapped Hole	Max. Temperature	Tapping	Mass
KM-T004T	φ40 (1.57) × 40 (1.57)	300N (30kgf)	Painting	M8 (0.31) depth 10 (0.39)	MAX. 350°C	Provided	0.4kg/0.88 lb
KM-T005T	φ50 (1.96) × 45 (1.77)	500N (50kgf)		pitch 1.25			0.67kg/1.47 lb

※The holding power applies to SS400, thickness 10mm and ground surface.

## Model KM-HT HEAT-RESISTING CLAMP HOLDER

The first release in this business field!

Heat resistance temperature 350 degree C

#### An example of mounting

heated at 195°C 2 hours by thermo couple fixed on the vertical face.



fixed with mending tape (as it was slid)



Fixed with heat resistance clamp holder

#### [Application]

Most suitable for wiring small diameter code, code for thermo couple and so on. In addition, it can be used as temporary fixing jig when welding.

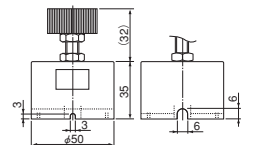
#### [Features]

- Provided with grooves of 3mm , 6mm width on the bottom face, it can be used in accordance with each diameter. ( Width and depth can be additionally processed up to 12mm in maximum. )
- By tightening clamping bolt, cord can be fixed without fail.



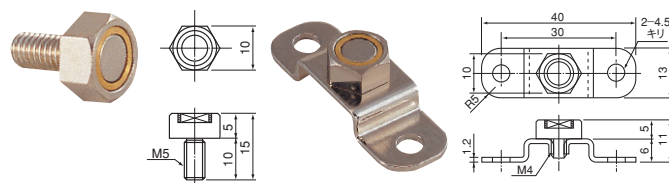
Model	Magnetic Base	Holding Power	Width of R groove	Power Cord	MasOs
KM-HT05	φ50 (1.96) × 35 (1.37)	196N (20kgf)	3mm (0.11) / 6mm (0.23)	under φ 5 (0.19)	Approx. 0.5kg/ 1.10 lb

※The holding power applies to SS400, thickness 10mm and ground surface.



## Model KM-RB HEXAGONAL PERMANENT MAGNETIC HOLDER (WITH MALE THREAD)

## Model KM-RT HEXAGONAL PERMANENT MAGNETIC HOLDER (WITH PLATE)



Model	Holding Power	Mass	Model	Holding Power	Mass
KM-RB10	10N (1kgf)	5g/0.011 lb	KM-RT10	10N (1kgf)	10g/0.022 lb
KM-RB14	40N (4kgf)	10g/0.022 lb	KM-RT14	40N (4kgf)	18g/0.039 lb

#### [Application]

This holder is used as a jig.

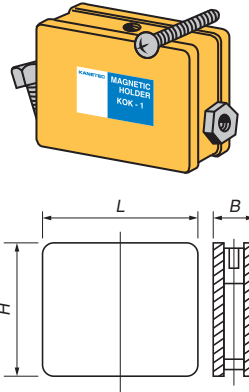
This holder is used for transporting light workpieces in manufacturing lines, etc.

#### [Features]

- This holder can be easily attached to any place, since its top end is threaded.
- When used in combination with the plate (type with plate) as an accessory, the holders can be installed in places where tapped holes can not be opened.
- Since this holder is plated with nickel, it can be used under various circumstances.

※The holding power applies to SS400, thickness 10mm and ground surface.

**Model KOK** MAGNETIC HOLDER



**[Application]**

Versatile holders having four attractive faces to meet various applications. These holders also have threaded holes to enable fixtures to be mounted for connection.

Model	Holding Power	Dimensions			Tapped Hole	Mass
		B	L	H		
KOK-1	200N (20kgf)	17.0 (0.66)	50	40	M5 (0.19) × 0.33	150g/0.33 lb
KOK-2	300N (30kgf)	27.6 (1.08)	100	50	M5 (0.19) × 0.61	280g/0.61 lb

※The holding power applies to SS400, thickness 10mm and ground surface.

**Model KOC** CABLE HANGER



**[Application]**

Most suitable for holding welding cable, for putting fixtures in order on work sites of shipbuilding, iron and steel manufacturing, bridge building, canneries and similar operations.

**[Features]**

- Strong holding power capable of destacking stacked thin iron sheets.
- Lateral sliding resistance of 80N (8kgf) gives the hanger good holding power.

Model	Holding Power	Dimensions			Mass
		Length	Width	Height	
KOC-1A	300N (30kgf)	50 (1.96)	27.6 (1.08)	40 (1.57)	400g/0.88 lb

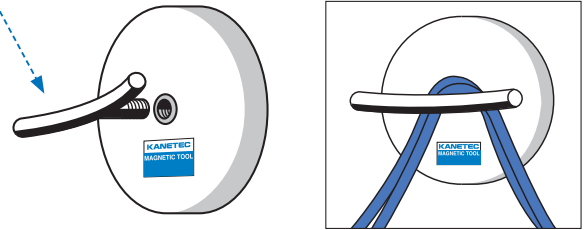
※The holding power applies to SS400, thickness 10mm and ground surface.  
※Height of hook part 87 mm.

**Model KOC** MAGNETIC HANGER

**Strong type**



Dedicated hanger included.



**[Application]**

Powerful magnetic hangerholder most suitable for cable arrangement and provisional wiring work on sites. Applicable to a wide range of uses as a hanger, since it powerfully attaches sheets, steel lockers, refrigerators, etc.

Model	Holding Power	Dimensions	Hanger Setting Screw	Mass
KOC-70	130N (13kgf)	φ66 (2.59) × 11 (0.43)	M6 (0.23) × 1.0 (0.03)	210g/0.46 lb
KOC-80	300N (30kgf)	φ80 (3.15) × 13 (0.51)	M6 (0.23) × 1.0 (0.03)	330g/0.72 lb

※The holding power applies to SS400, thickness 10mm and ground surface.

**Model WK** POWERFUL MAGNETIC HOLDER

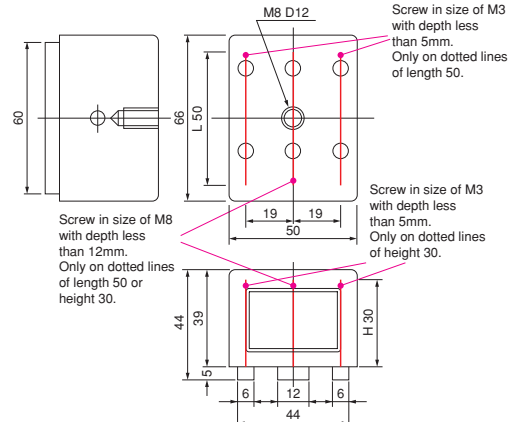


**[Application]**

Suitable as holding tools for tentative installation and tack welding on such work sites of construction, bridge, ship building and piping.

**[Features]**

- There are three faces where additional machining (such as drilling) can be done. (Refer to the dimension drawing)
- The exterior is made of aluminum to prevent adhesion of iron powder to the top and side faces.
- Model WK-TP has a construction that is highly resistant to heat.



Model	Heat Resistance	Holding Power	Mass
WK-P	60°C	1000N (100kgf)	0.75kg/1.65 lb
WK-TP	180°C		

※The holding power applies to SS400, thickness 10mm and ground surface.

ELECTROMAGNETIC CHUCKS  
CHUCK CONTROLLERS  
PERMANENT MAGNETIC CHUCKS  
PERMANENT ELECTROMAGNETIC CHUCKS  
BLOCKS FOR MC  
VACUUM CHUCKS  
PROMELTA SYSTEM  
SINE BAR CHUCKS  
MAGNETIC BLOCKS  
WORKING TOOLS  
MEASURING TOOL HOLDERS  
MAGNETIC HOLDERS  
MAGNETIC TOOLS