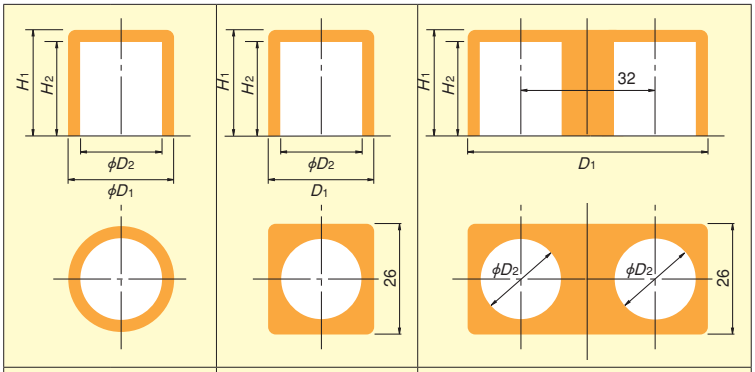
# Model KM PERMANENT MAGNETIC HOLDER

## List of permanent magnetic holders

| Size | Height | OD "h" Tolerance | Plating | Painting | Peripheral Knurling | Stainless Steel Spec. | Heat-Resistance Spec. |
|---|---|---|---|---|---|---|---|
| ϕ 5 | × 8 | KM-0005 | | | | | |
| | ×13 | | KM-0005L | | | | |
| ϕ 7 | × 8 | KM-0007 | | | | | |
| | ×13 | | KM-0007L | | | | |
| ϕ10 | × 8 | | KM-0010H | | KM-0010J | KM-0010H-SUS | |
| | ×15 | KM-H001 | KM-001 | | | | |
| | ×18 | | KM-T001 | | | | |
| ϕ15 | ×15 | KM-H0015 | KM-0015 | | | | |
| | ×18 | | KM-T0015 | | | | |
| ϕ18 | × 8 | | KM-0018H | | KM-0018J | KM-0018H-SUS | |
| ϕ20 | ×15 | KM-H002 | KM-002 | | | | |
| | ×18 | | KM-T002 | | | | |
| ϕ25 | ×10 | | KM-0025H | | KM-0025J | KM-0025H-SUS | |
| ϕ26 | ×25 | KM-H0025 | | KM-025C | | | |
| | ×30 | | KM-T0025 | | | | |
| ϕ30 | ×25 | | | KM-03C | | | |
| | ×33 | | KM-T003 | | | | |
| ϕ40 | ×30 | | | KM-04C | | | |
| ϕ40 | ×40 | | | | | | KM-T004T |
| ϕ50 | ×40 | | | KM-05C | | | |
| ϕ50 | ×45 | | | | | | KM-T005T |
| ϕ70 | ×40 | | | KM-07C | | | |
| ϕ80 | ×45 | | | KM-08C | | | |
| 26×26 | ×25 | | | KM-025S | | | |
| 26×60 | ×25 | | | KM-06S | | | |




| | | |
|---|---|---|
| KM-0005 | KM-05C | KM-025S |
| KM-0007 | KM-07C | |
| KM-001 | KM-08C | |
| KM-0015 | KM-0005L | |
| KM-002 | KM-0007L | |
| KM-025C | KM-H | |
| KM-03C | KM-T | |
| KM-04C | | |

KM-06S

※ The holding power may drop when the holder is worked on additionally. In particular, additional work in the radial direction has large influence on the holding power and therefore, must be limited to a minimum necessary scope.

area·····Additionally workable.

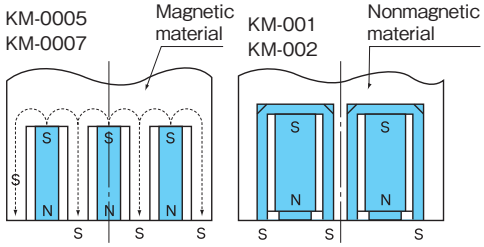
[Application]

Can be used to hold down drawings, rules and paper patterns. The holders with a tapped hole on the back can be used widely by installing them on jigs. Can be incorporated in press dies. Can hold workpieces during wire cutting.

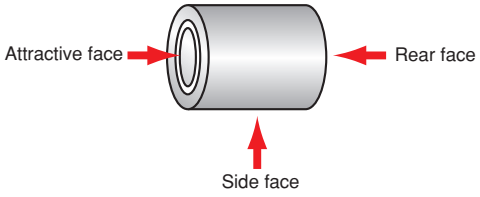
[Features]

- Six types of specifications; OD tolerance, plating, painting, peripheral knurling, stainless steel spec. and heat-resistance spec. are available for selection according to applications.
- By matching the OD "h" tolerance, the holders can be incorporated in dies.
- A tapped hole on the back makes the holders useful in various applications.

## Embedded in a jig (Example)




## Names of faces




## Upper limit of working temperature

The holding power drops as body temperature rises. The following types are available. The original holding power returns to the original level when the temperature drops to normal temperature.

### ■Type A (Alnico magnet used)

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

### ■Type B (Samarium-cobalt type rare earth magnet used)

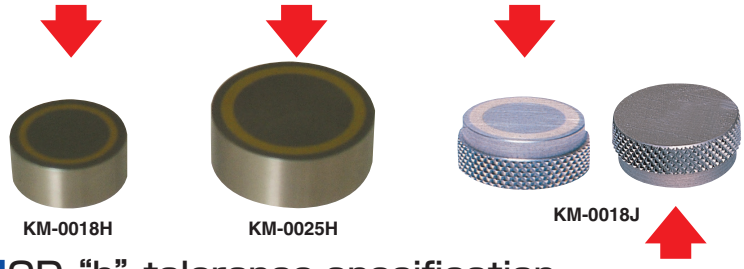
The holding power drops to about 95% at 100℃ and to about 85% at 200℃ when the holding power at 20℃ is 100%. For continuous use, the upper limit is 150℃ and for intermittent use for a short period of time, this type may be used up to 200℃.

### ■Type C (Neodymium rare earth magnet used)

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

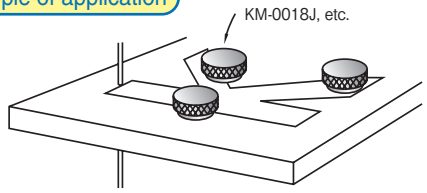
indicates the attractive face.

indicates the attractive face.



KM-0018H　KM-0025H　KM-0018J

An example of application




These holders can be used to hold pieces cut out by wire cutting to prevent them from moving or falling from the securing area.

## OD "h" tolerance specification

[mm(in)]

| Model | Dimensions | | | Holding Power | Surface Treatment | Mounting Tapped Hole | Workable Range | | | | Upper Limit of Working Temp. | Tapping | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OD × Height | "h" tolerance | Height tolerance | | | | $D_1$ | $D_2$ | $H_1$ | $H_2$ | | | |
| KM-0005 | φ5(0.19)h7(0.27)× 8(0.31) | $^{0}_{-0.012}$ | 0 −0.1 | 0.3N (0.03kgf) | None | None | 5(0.19) | 4.5(0.17) | — | — | Type B | Not allowed. | 1.5g/0.003 lb |
| KM-0007 | φ7(0.27)h7(0.27)× 8(0.31) | $^{0}_{-0.015}$ | | 0.4N (0.04kgf) | | | 7(0.27) | 6.5(0.25) | | | | | 2.5g/0.005 lb |
| KM-H001 | φ10(0.39)h9(0.35)×15(0.59) | $^{0}_{-0.036}$ | | 8N (0.8kgf) | | | 10(0.39) | 9.5(0.37) | 15 (0.59) | 12 (0.47) | Type A | Prepared hole up to 3.0 deep on the rear face allowed. | 11g/0.024 lb |
| KM-H0015 | φ15(0.59)h9(0.35)×15(0.59) | $^{0}_{-0.043}$ | | 20N (2kgf) | | | 15(0.59) | 14(0.55) | | | | | 20g/0.044 lb |
| KM-H002 | φ20(0.78)h9(0.35)×15(0.59) | $^{0}_{-0.052}$ | | 40N (4kgf) | | | 20(0.78) | 18(0.70) | | | | | 40g/0.088 lb |
| KM-H0025 | φ26(1.02)h9(0.35)×25(0.98) | $^{0}_{-0.052}$ | | 100N (10kgf) | | | 26(1.02) | 24(0.94) | 25 (0.98) | 21 (0.82) | | Prepared hole up to 4.0 deep on the rear face allowed. | 100g/0.222 lb |

※The holding power is based on a test piece of SS400, 10 mm thick, ground surface. ※The holding power may drop when the holder is worked on additionally. In particular, additional work in the radial direction has large influence on the holding power and therefore, must be limited to a minimum necessary scope.

## Plating specification

[mm(in)]

| Model | OD × Height | Holding Power | Surface Treatment | Mounting Tapped Hole | Workable Range | | | | Upper Limit of WorkingTemp. | Tapping | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | $D_1$ | $D_2$ | $H_1$ | $H_2$ | | | |
| KM-0005L | φ5(0.19)×13(0.51) | 1.8N (0.18kgf) | Nickle plating | None | — | — | 13(0.51) | 12(0.47) | Type A | Not allowed. | 2g/0.004 lb |
| KM-0007L | φ7(0.27)×13(0.51) | 4N (0.4kgf) | | | 7(0.27) | 6.5(0.25) | | | | | 3.8g/0.008 lb |
| KM-0010H | φ10(0.39)×8 (0.31) | 3N (0.3kgf) | | | — | — | — | — | Type B | | 5g/0.011 lb |
| KM-001 | φ10(0.39)×15(0.59) | 8N (0.8kgf) | | | 10(0.39) | 9.5(0.37) | 15(0.59) | 12(0.47) | Type A | Prepared hole up to 3.0 deep on the rear face allowed. | 11g/0.024 lb |
| KM-T001 | φ10(0.39)×18(0.70) | | | M5(0.19)Depth5(0.19)pitch0.8(0.03) | | | 18(0.70) | | | Provided. | 12g/0.026 lb |
| KM-0015 | φ15(0.59)×15(0.59) | 20N (2kgf) | | None | 15(0.59) | 14(0.55) | 15(0.59) | | | Prepared hole up to 3.0 deep on the rear face allowed. | 20g/0.044 lb |
| KM-T0015 | φ15(0.59)×18(0.70) | | | M5(0.19)Depth5(0.19)pitch0.8(0.03) | | | 18(0.70) | | | Provided. | 23g/0.051 lb |
| KM-0018H | φ18(0.70)×8 (0.31) | 50N (5kgf) | | None | — | — | — | — | Type B | Not allowed. | 16g/0.035 lb |
| KM-002 | φ20(0.78)×15(0.59) | 40N (4kgf) | | | 20(0.78) | 18(0.70) | 15(0.59) | 12(0.47) | Type A | Prepared hole up to 3.0 deep on the rear face allowed. | 40g/0.088 lb |
| KM-T002 | φ20(0.78)×18(0.70) | | | M5(0.19)Depth5(0.19)pitch0.8(0.03) | | | 18(0.70) | | | Provided. | 45g/0.100 lb |
| KM-0025H | φ25(0.98)×10(0.39) | 90N (9kgf) | | None | — | — | — | — | Type B | Not allowed. | 38g/0.083 lb |
| KM-T0025 | φ26(1.02)×30(1.18) | 100N (10kgf) | | M6(0.23)Depth10(0.39)pitch1.0(0.03) | 26(1.02) | 24(0.94) | 30(1.18) | 21(0.82) | Type A | Provided. | 120g/0.266 lb |
| KM-T003 | φ30(1.18)×33(1.29) | 150N (15kgf) | | M6(0.23)Depth8(0.31)pitch1.0(0.03) | 30(1.18) | 27(1.06) | 33(1.29) | 28(1.10) | | | 180g/0.400 lb |

※The holding power is based on a test piece of SS400, 10 mm thick, ground surface. ※The holding power may drop when the holder is worked on additionally. In particular, additional work in the radial direction has large influence on the holding power and therefore, must be limited to a minimum necessary scope.

## Peripheral knurling specification

[mm(in)]

| Model | OD × Height | Holding Power | Surface Treatment | Mounting Tapped Hole | Upper Limit of Working Temp. | Feature | Mass |
|---|---|---|---|---|---|---|---|
| KM-0010J | φ10(0.39)×8(0.31) | 3N (0.3kgf) | Nickle plating | None | Type B | Peripheral knurling | 5g/0.011 lb |
| KM-0018J | φ18(0.70)×8(0.31) | 50N (5kgf) | | | | | 16g/0.035 lb |
| KM-0025J | φ25(0.98)×10(0.39) | 90N (9kgf) | | | | | 38g/0.083 lb |

※The holding power is based on a test piece of SS400, 10 mm thick, ground surface.

## First in the industry! Stainless steel to resist rusting.

indicates the attractive face.

KM-0010H-SUS　KM-0018H-SUS　KM-0025H-SUS

Working up to 0.5 mm allowed on the attractive face.

Comparison in pure water (Left: Made of stainless steel)

## Stainless steel specification

[mm(in)]

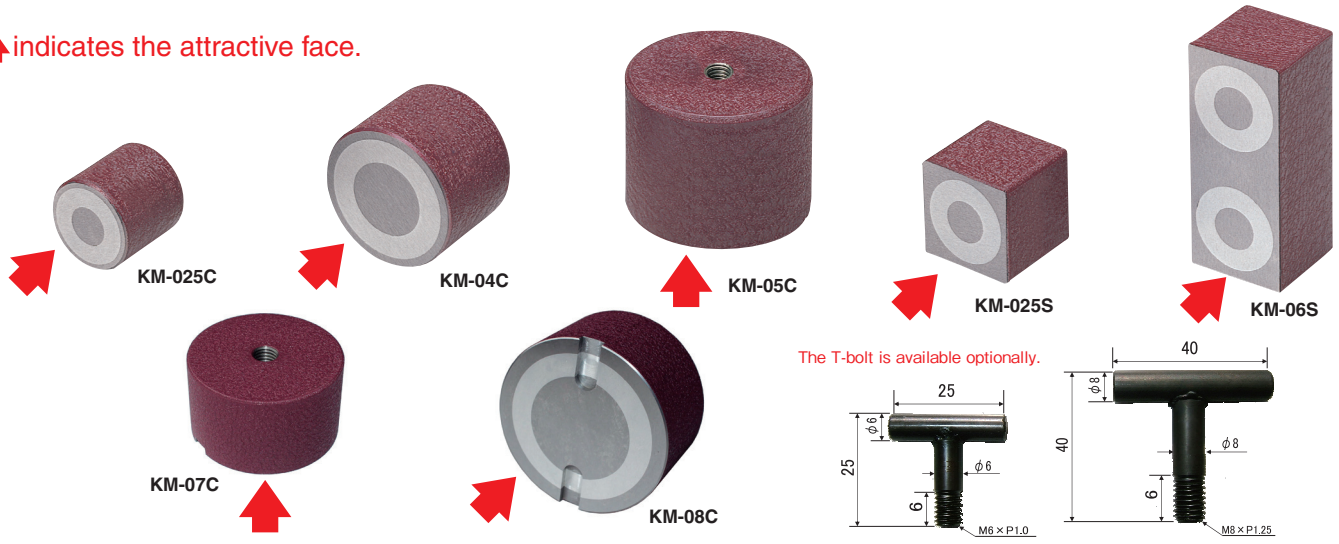
| Model | OD × Height | Holding Power | Surface Treatment | Mounting Tapped Hole | Upper Limit of Working Temp. | Tapping | Mass |
|---|---|---|---|---|---|---|---|
| KM-0010H-SUS | φ10(0.39)×8(0.31) | 3N(0.3kgf) | None | None | Type B | Not allowed. | 5g/0.011 lb |
| KM-0018H-SUS | φ18(0.70)×8(0.31) | 50N(5kgf) | | | | | 16g/0.035 lb |
| KM-0025H-SUS | φ25(0.98)×10(0.39) | 90N(9kgf) | | | | | 38g/0.083 lb |

※The holding power is based on a test piece of SS400, 10 mm thick, ground surface.

# MAGNETIC HOLDERS

## Model KM PERMANENT MAGNETIC HOLDER

▲indicates the attractive face.




The T-bolt is available optionally.




For KM-025C, 03C, 06S　　For KM-04C, 05C

### ■Painting specification

[mm(in)]

| Model | OD × Height | Holding Power | Surface Treatment | Mounting Tapped Hole | Workable Range $D_1$ | Workable Range $D_2$ | Workable Range $H_1$ | Workable Range $H_2$ | Upper Limit of Working Temp. | Tapping | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KM-025C | φ26(1.02)×25(0.98) | 100N( 10kgf) | Painting | M 6(0.23),depth 8(0.31) pitch1.0(0.03) | 26(1.02) | 25(0.98) | 25(0.98) | 17(0.66) | Type C (See page 81) | Provided. | 90g/0.19 lb |
| KM-03C | φ30(1.18)×25(0.98) | 150N( 15kgf) | | | 30(1.18) | 27(1.06) | | | | | 121g/0.26 lb |
| KM-04C | φ40(1.57)×30(1.18) | 300N( 30kgf) | | M 8(0.31),depth 12(0.47) pitch1.25(0.04) | 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) | | | 50(1.96) | 46(1.81) | 40(1.57) | 25(0.98) | | | 545g/1.20 lb |
| KM-07C | φ70(2.75)×40(1.57) | 700N( 70kgf) | | M12(0.47),depth 15(0.59) pitch1.75(0.06) | 70(2.75) | 60(2.36) | | | | | 1000g/2.20 lb |
| KM-08C | φ80(3.14)×45(1.77) | 1000N(100kgf) | | M12(0.47),depth 18(0.70) pitch1.75(0.06) | 80(3.14) | 66(2.59) | 45(1.77) | 27(1.06) | | | 1600g/3.52 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 11 deep on the rear face allowed. | 118g/0.26 lb |
| KM-06S | 26(1.02)×60(2.36)×25(0.98) | 200N( 20kgf) | | M6(0.23),depth 10(0.39) pitch1.0(0.03) | 60(2.36) | | | | | Provided | 275g/0.60 lb |

※The holding power is based on a test piece of SS400, 10 mm thick, ground surface.

## Model KM-T-T HEAT-RESISTANT PERMANENT MAGNETIC HOLDER

▲indicates the attractive face.


### A heat-resistant type introduced to permanent magnetic holders!

[Application]

Most suitable as a securing fixture in workplaces where heat is generated such as ship building and welding sites. These holders can also be used to hold down drawings, rulers and small parts.

[Features]

- ●Heat resistance up to 350℃
- ●The tapped hole provided on the back widens a scope of use by assembling these holders to fixtures.

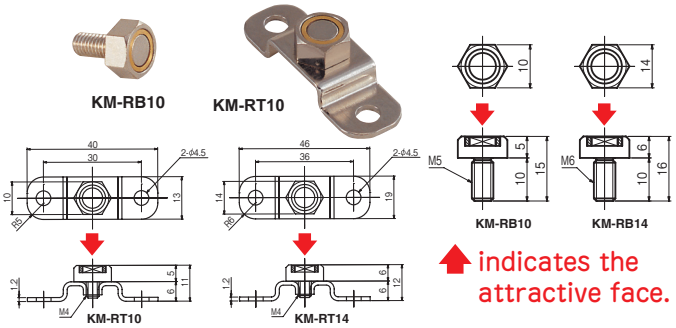
[mm(in)]

| Model | OD×Height | Holding Power | Surface Treatment | Mounting Tapped Hole | Upper Limit of Working Temp. | Tapping | Mass |
|---|---|---|---|---|---|---|---|
| KM-T004T | φ40(1.57)×40(1.57) | 300N(30kgf) | Painting | M8(0.31) depth10(0.39) pitch1.25(0.04) | Max. 350℃ | Provided. | 0.4kg/0.88 lb |
| KM-T005T | φ50(1.96)×45(1.77) | 500N(50kgf) | | | | | 0.67kg/1.47 lb |

※The holding power is based on a test piece of SS400, 10 mm thick, ground surface.

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

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




[Application]

Used as a jig. Used for operations of conveying light weight workpieces in lines, etc.

[Features]

- ●The tip of the permanent magnetic holder is threaded, which enables the holder to be mounted in any place easily.
- ●When used in combination with the included plate, the holder can be mounted in places where a tapped hole cannot be made. (Model KM-RT)
- ●Since this holder has been nickel plated, it can be used under various circumstances.

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

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

※The holding power is based on a test piece of SS400, 10 mm thick, ground surface.