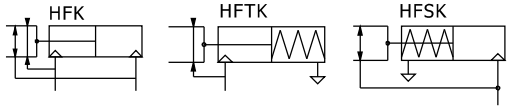
## Parallel style with guide track——Roller bearing




## Ordering code

**HFK 20 □**

1 2 3

**① Model**

HFK: Air finger(Double acting)

HFSK: Air finger
(Single acting and nrmally closed)

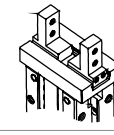
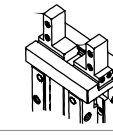
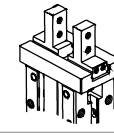
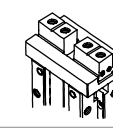
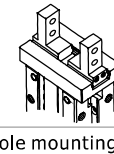
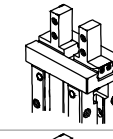
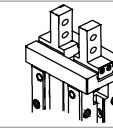
HFTK: Air finger
(Single acting and normally opened)

**② Bore size**

10 16 20 25 32 40

HFK series are all attached with magnet.
Sensor should be ordered individually.

**③ Finger type**

| Bore size | Finger type | |
|---|---|---|
| 10 16 20 25 32 40 | Blank: Standard  | B: Side mounting type  |
| | R: Narrow type  | F: Bottom mounting type  |
| 10 16 20 25 | N: Thru.hole mounting type  | W: Side mounting and arrow type  |
| | M: Thru.hole mounting and narrow type  | |

## Specification

| Bore size (mm) | | | 10 | 16 | 20 | 25 | 32 | 40 |
|---|---|---|---|---|---|---|---|---|
| Acting type | | | Double acting Single acting | | | | | |
| Fluid | | | Air(to be filtered by 40μm filter element) | | | | | |
| Operating pressure | Double acting | Φ10 | 28~100psi(0.2~0.7MPa) | | | | | |
| | | Others | 22~100psi(0.15~0.7MPa) | | | | | |
| | Single acting | Φ10 | 50~100psi(0.35~0.7MPa) | | | | | |
| | | Others | 36~100psi(0.25~0.7MPa) | | | | | |
| Temperature | | | -20~70℃ | | | | | |
| Lubrication | | | Not required | | | | | |
| Repeatability mm | | | ±0.01 | | | | ±0.02 | |
| Max. frequency | | | 180(c.p.m) | | | | 60(c.p.m) | |
| Sensor switches | | | CMSH DMSH, EMSH | CMSG, DMSG, EMSG CMSH,DMSH, EMSH | | | | |
| Port size | | | M3×0.5 | M5×0.8 | | | | |

Add) Refer to P530 for detail of sensor.

# HFK Series

## Bore size: Φ10, Φ16, Φ20, Φ25, Φ32, Φ40

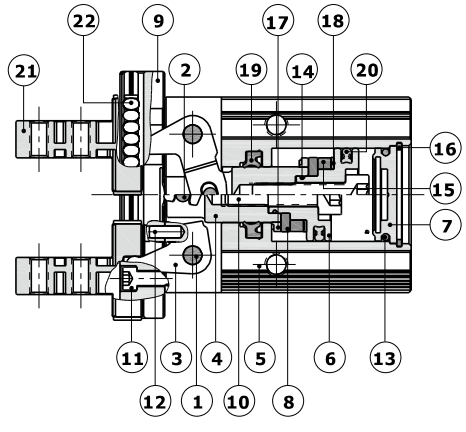
## Gripping force and stroke

| Acting type | | Double acting(HFK) | | | | | | Single acting_NO (HFTK) | | | | | | Single acting_NC (HFSK) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore size | | 10 | 16 | 20 | 25 | 32 | 40 | 10 | 16 | 20 | 25 | 32 | 40 | 10 | 16 | 20 | 25 | 32 | 40 |
| Gripping force per finger Effective value(N) | External | 11 | 34 | 45 | 69 | 160 | 255 | 7 | 27 | 35 | 55 | 133 | 220 | - | - | - | - | - | - |
| | Internal | 17 | 45 | 68 | 102 | 195 | 320 | - | - | - | - | - | - | 13 | 38 | 59 | 87 | 163 | 270 |
| Opening/Closing stroke(Both sides)(mm) | | 4 | 6 | 10 | 14 | 22 | 30 | 4 | 6 | 10 | 14 | 22 | 30 | 4 | 6 | 10 | 14 | 22 | 30 |
| Weight (g) | F Type | 56 | 124 | 236 | 418 | 750 | 1340 | 57 | 125 | 238 | 420 | 799 | 1437 | 57 | 125 | 238 | 420 | 799 | 1437 |
| | Others | 56 | 124 | 236 | 428 | 729 | 1268 | 57 | 125 | 238 | 430 | 778 | 1365 | 57 | 125 | 238 | 430 | 778 | 1365 |

[Note] The gripping force in the above table is in the working pressure of 75psi, and with a gripping point of L=20mm.

Add) Please refer to page 488 for the definition of "L".

## Inner structure




| NO. | Item | NO. | Item |
|---|---|---|---|
| 1 | Pin | 12 | Pin |
| 2 | Pin | 13 | O-ring |
| 3 | Curved bar | 14 | O-ring |
| 4 | Piston rod | 15 | Magnet |
| 5 | Body | 16 | C clip |
| 6 | Piston | 17 | Bumper |
| 7 | Back cover | 18 | Magnet washer |
| 8 | Magnet fixed flake | 19 | Rod packing |
| 9 | Rail | 20 | Piston seal |
| 10 | Countersink screw | 21 | Clamping jaw |
| 11 | Countersink screw | 22 | Guide roller |

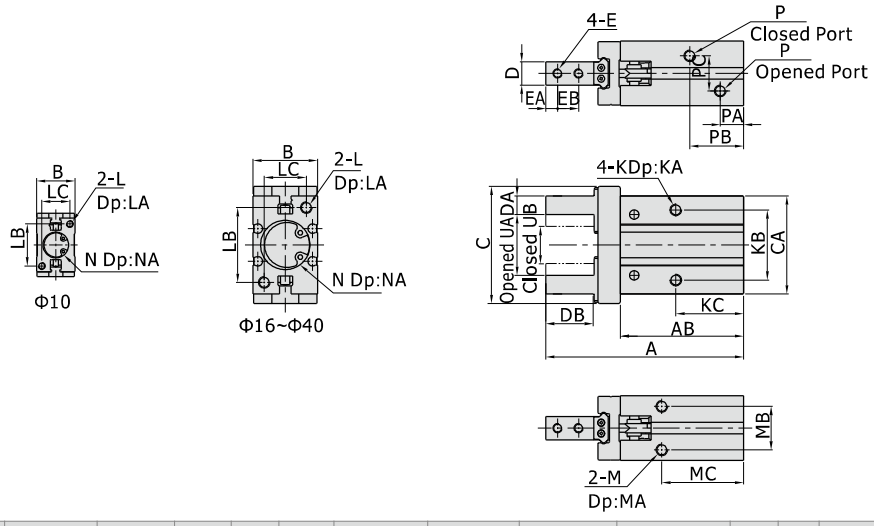
Note: inner structure & material data sheet is based on certain bore size.
Please contact AirTAC if you need inner structure & material data sheet for specific bore size.

# HFK Series

**Bore size: Φ10, Φ16, Φ20, Φ25, Φ32, Φ40**

## Dimensions

### Standard




[Unit: mm]

| Model\Item | A | AB | B | C | CA | D | DA | DB | E | EA | EB | K | KA | KB | KC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HFK10 | 57 | 37.5 | 16.5 | 30 | 23 | $5^{0}_{-0.05}$ | $4^{0}_{-0.05}$ | $12.2^{0}_{-0.1}$ | M2.5×0.45 | 3 | 5.7 | M3×0.5 | 5 | 16 | 23 |
| HFK16 | 67.5 | 42.5 | 23.5 | 39 | 30.5 | $8^{0}_{-0.05}$ | $5^{0}_{-0.05}$ | $15.3^{0}_{-0.1}$ | M3×0.5 | 4 | 7 | M4×0.7 | 7 | 24 | 24.5 |
| HFK20 | 85 | 53 | 27.5 | 53 | 42 | $10^{0}_{-0.05}$ | $8^{0}_{-0.05}$ | $20.5^{0}_{-0.1}$ | M4×0.7 | 5 | 9 | M5×0.8 | 8 | 30 | 29 |
| HFK25 | 103 | 64 | 33.5 | 71 | 52 | $12^{0}_{-0.05}$ | $10^{0}_{-0.05}$ | $25.3^{0}_{-0.1}$ | M5×0.8 | 6 | 12 | M6×1.0 | 10 | 36 | 30 |
| HFK32 | 113(122) | 67(76) | 40 | 106 | 60 | $15^{0}_{-0.05}$ | $12^{0}_{-0.05}$ | $29.75^{0}_{-0.1}$ | M6×1.0 | 7 | 14 | M6×1.0 | 10 | 46 | 40(49) |
| HFK40 | 139(152) | 83(96) | 48 | 132 | 72 | $18^{0}_{-0.05}$ | $14^{0}_{-0.05}$ | $36.75^{0}_{-0.1}$ | M8×1.25 | 9 | 17 | M8×1.25 | 12 | 56 | 49(62) |

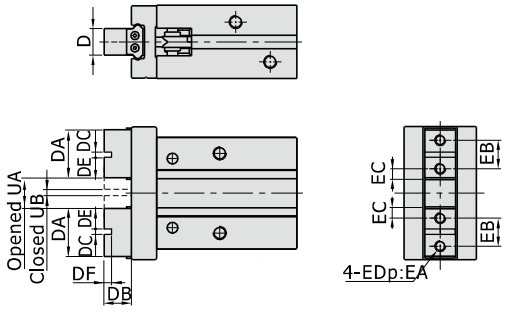
| Model\Item | L | LA | LB | LC | M | MA | MB | MC | N | NA | P | PA | PB | PC | UA(Opened) | UB(Closed) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HFK10 | M3×0.5 | 6 | 18 | 12 | M3×0.5 | 6 | 11.5 | 27 | $\Phi11^{+0.05}_{0}$ | 1.5 | M3×0.5 | 7 | 19 | 10 | $15.5^{+2}_{0}$ | $11.5^{0}_{-1}$ |
| HFK16 | M4×0.7 | 8 | 22 | 15 | M4×0.7 | 4.5 | 16 | 30 | $\Phi17^{+0.05}_{0}$ | 1.5 | M5×0.8 | 7.5 | 19 | 13 | $21^{+2}_{0}$ | $15^{0}_{-1}$ |
| HFK20 | M5×0.8 | 10 | 32 | 18 | M5×0.8 | 8 | 18.5 | 35 | $\Phi21^{+0.05}_{0}$ | 2 | M5×0.8 | 9.5 | 23 | 15 | $26.5^{+2}_{0}$ | $16.5^{0}_{-1}$ |
| HFK25 | M6×1.0 | 12 | 40 | 22 | M6×1.0 | 10 | 22 | 36.5 | $\Phi26^{+0.05}_{0}$ | 2 | M5×0.8 | 9 | 24 | 20 | $33.5^{+2}_{0}$ | $19.5^{0}_{-1}$ |
| HFK32 | M6×1.0 | 12 | 46 | 26 | M6×1.0 | 10 | 26 | 48(57) | $\Phi34^{+0.05}_{0}$ | 2.5 | M5×0.8 | 9.5 | 31(40) | 24 | $48^{+2.5}_{0}$ | $26^{0}_{-1}$ |
| HFK40 | M8×1.25 | 16 | 56 | 32 | M8×1.25 | 12 | 32 | 58(71) | $\Phi42^{+0.05}_{0}$ | 2.5 | M5×0.8 | 10.5 | 38(50) | 28 | $60^{+2.5}_{0}$ | $30^{0}_{-1}$ |

[Note]The values in "()" in the above table are single acting type sizes.

### Bottom mounting type(F type)

Φ10~Φ40

[Unit: mm]




| Model\Item | D | DA | DB | DC | DE | E |
|---|---|---|---|---|---|---|
| HFK10F | $5^{0}_{-0.05}$ | 11 | 5 | $2^{+0.04}_{+0.01}$ | 4.5 | M2.5×0.45 |
| HFK16F | $8^{0}_{-0.05}$ | 14 | 8 | $2.5^{+0.04}_{+0.01}$ | 5.8 | M3×0.5 |
| HFK20F | $10^{0}_{-0.05}$ | 18 | 10.5 | $3^{+0.04}_{+0.01}$ | 7.5 | M4×0.7 |
| HFK25F | $12^{0}_{-0.05}$ | 22 | 13 | $4^{+0.04}_{+0.01}$ | 9 | M5×0.8 |
| HFK32F | $15^{0}_{-0.05}$ | 34.5 | 18 | $5^{+0.04}_{+0.01}$ | 14.8 | M6×1.0 |
| HFK40F | $18^{0}_{-0.05}$ | 41.5 | 22 | $6^{+0.04}_{+0.01}$ | 17.7 | M8×1.25 |

| Model\Item | DF | EA | EB | EC | UA(Opened) | UB(Closed) |
|---|---|---|---|---|---|---|
| HFK10F | 2 | 4 | 6 | 2.45 | $5.5^{+2}_{0}$ | $1.8^{0}_{-0.5}$ |
| HFK16F | 2.5 | 6 | 8 | 3.05 | $7.5^{+2}_{0}$ | $1.8^{0}_{-0.5}$ |
| HFK20F | 3 | 8 | 10 | 3.95 | $11.5^{+2}_{0}$ | $1.8^{0}_{-0.5}$ |
| HFK25F | 4 | 10 | 12 | 4.9 | $16^{+2.5}_{0}$ | $2.4^{0}_{-0.5}$ |
| HFK32F | 5 | 12 | 20 | 7.3 | $25^{+2.5}_{0}$ | $3.4^{0}_{-0.5}$ |
| HFK40F | 6 | 16 | 24 | 8.7 | $33^{+3}_{0}$ | $3.4^{0}_{-0.5}$ |

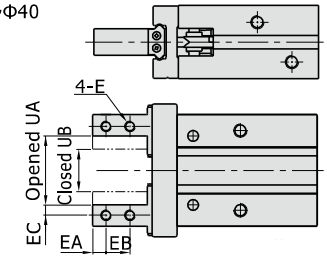
[Note] The other dimensions are the same as standard type.

# HFK Series

**Bore size: Φ10, Φ16, Φ20, Φ25, Φ32, Φ40**

## Side mounting type(B type)

Φ10~Φ40

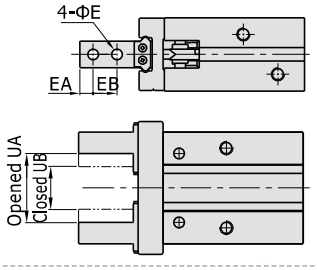



[Unit: mm]

| Model\Item | E | EA | EB | EC | UA(Opened) | UB(Closed) |
|---|---|---|---|---|---|---|
| HFK10B | M2.5×0.45 | 3 | 5.7 | 2 | 15.5 $^{+2}_{0}$ | 11.5 $^{0}_{-1}$ |
| HFK16B | M3×0.5 | 4 | 7 | 2.5 | 21 $^{+2}_{0}$ | 15 $^{0}_{-1}$ |
| HFK20B | M4×0.7 | 5 | 9 | 4 | 26.5 $^{+2}_{0}$ | 16.5 $^{0}_{-1}$ |
| HFK25B | M5×0.8 | 6 | 12 | 5 | 33.5 $^{+2}_{0}$ | 19.5 $^{0}_{-1}$ |
| HFK32B | M6×1.0 | 7 | 14 | 6 | 48 $^{+2.5}_{0}$ | 26 $^{0}_{-1}$ |
| HFK40B | M8×1.25 | 9 | 17 | 7 | 60 $^{+2.5}_{0}$ | 30 $^{0}_{-1}$ |

## Thru.hole mounting type(N type)

Φ10~Φ40

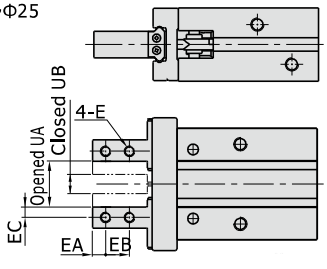



[Unit: mm]

| Model\Item | E | EA | EB | UA(Opened) | UB(Closed) |
|---|---|---|---|---|---|
| HFK10N | 2.8 | 3 | 5.7 | 15.5 $^{+2}_{0}$ | 11.5 $^{0}_{-1}$ |
| HFK16N | 3.3 | 4 | 7 | 21 $^{+2}_{0}$ | 15 $^{0}_{-1}$ |
| HFK20N | 4.5 | 5 | 9 | 26.5 $^{+2}_{0}$ | 16.5 $^{0}_{-1}$ |
| HFK25N | 5.5 | 6 | 12 | 33.5 $^{+2}_{0}$ | 19.5 $^{0}_{-1}$ |
| HFK32N | 6.5 | 7 | 14 | 48 $^{+2.5}_{0}$ | 26 $^{0}_{-1}$ |
| HFK40N | 9 | 9 | 17 | 60 $^{+2.5}_{0}$ | 30 $^{0}_{-1}$ |

## Side mounting and narrow type(W type)

Φ10~Φ25

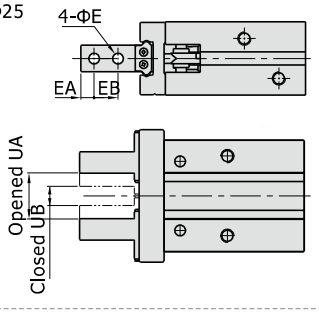



[Unit: mm]

| Model\Item | E | EA | EB | EC | UA(Opened) | UB(Closed) |
|---|---|---|---|---|---|---|
| HFK10W | M2.5×0.45 | 3 | 5.7 | 2 | 10 $^{+2}_{0}$ | 6 $^{0}_{-1}$ |
| HFK16W | M3×0.5 | 4 | 7 | 2.5 | 12.5 $^{+2}_{0}$ | 6.5 $^{0}_{-1}$ |
| HFK20W | M4×0.7 | 5 | 9 | 4 | 17 $^{+2}_{0}$ | 7 $^{0}_{-1}$ |
| HFK25W | M5×0.8 | 6 | 12 | 5 | 23 $^{+2.5}_{0}$ | 9 $^{0}_{-1}$ |

## Thru.hole mounting and narrow type(M type)

Φ10~Φ25

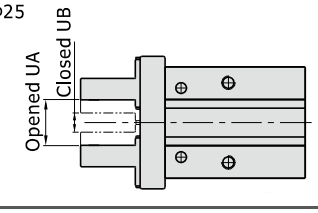



[Unit: mm]

| Model\Item | E | EA | EB | UA(Opened) | UB(Closed) |
|---|---|---|---|---|---|
| HFK10M | 2.8 | 3 | 5.7 | 10 $^{+2}_{0}$ | 6 $^{0}_{-1}$ |
| HFK16M | 3.3 | 4 | 7 | 12.5 $^{+2}_{0}$ | 6.5 $^{0}_{-1}$ |
| HFK20M | 4.5 | 5 | 9 | 17 $^{+2}_{0}$ | 7 $^{0}_{-1}$ |
| HFK25M | 5.5 | 6 | 12 | 23 $^{+2.5}_{0}$ | 9 $^{0}_{-1}$ |

## Narrow type(R type)

Φ10~Φ25




[Unit: mm]

| Model\Item | UA(Opened) | UB(Closed) |
|---|---|---|
| HFK10R | 10 $^{+2}_{0}$ | 6 $^{0}_{-1}$ |
| HFK16R | 12.5 $^{+2}_{0}$ | 6.5 $^{0}_{-1}$ |
| HFK20R | 17 $^{+2}_{0}$ | 7 $^{0}_{-1}$ |
| HFK25R | 23 $^{+2.5}_{0}$ | 9 $^{0}_{-1}$ |