

AKH/AKB Series

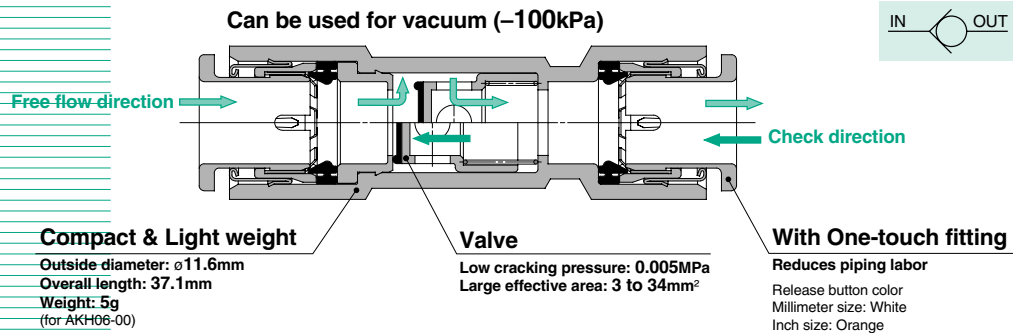
Check Valve with One-touch Fitting



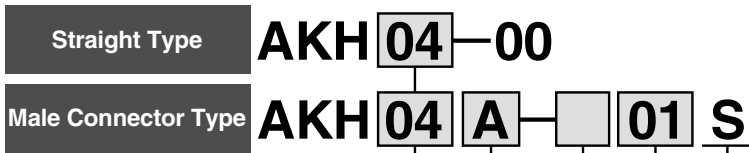
Straight Type
Easily installed in pipe lines

Male Connector Type
Can be mounted directly onto equipment

Bushing Type
Can be used in applications with splashing coolant and spatter, etc.



How to Order



Applicable tube O.D.

Millimeter size		Inch size	
04	ø4	03	ø5/32
06	ø6	07	ø1/4
08	ø8	09	ø5/16
10	ø10	11	ø3/8
12	ø12	13	ø1/2

• **With sealant (standard)**
 * Not applicable to types M5 & 10-32UNF are not required.

• **Thread type**

Nil	Metric system thread (M5)
	Unified thread (10-32UNF)
N	Rc(PT)
	NPT

• **Port size**

M5	M5 x 0.8
U10/32	10-32UNF
01	1/8
02	1/4
03	3/8
04	1/2

• **Check valve free flow direction**

A	From male thread to one-touch fitting	
B	From one-touch fitting to male thread	

Applicable Tube O.D. /Port Size Combinations

Millimeter size

Model	Applicable tube O.D.	Port size Rc(PT)				
		M5	1/8	1/4	3/8	1/2
AKH04□	ø4	●	●			
AKH06□	ø6	●	●	●		
AKH08□	ø8		●	●	●	
AKH10□	ø10			●	●	●
AKH12□	ø12				●	●

Inch size

Model	Applicable tube O.D.	Port size NPT				
		10-32 UNF	1/8	1/4	3/8	1/2
AKH03□	ø5/32"	●	●			
AKH07□	ø1/4"	●	●	●		
AKH09□	ø5/16"		●	●	●	
AKH11□	ø3/8"			●	●	●
AKH13□	ø1/2"				●	●



Body size

01	1/8
02	1/4
03	3/8
04	1/2

• **With sealant (standard)**

• **Thread type**

Nil	R
N	NPT

• **Port size**

01	1/8
02	1/4
03	3/8
04	1/2

• **Check valve free flow direction**

A	From male thread to female thread	
B	From female thread to male thread	

Female Thread/Male Thread Combinations

R(PT) thread

Model	Female thread Rc(PT)	Male thread R			
		1/8	1/4	3/8	1/2
AKB01□	1/8	●			
AKB02□	1/4		●		
AKB03□	3/8			●	
AKB04□	1/2				●

NPT thread

Model	Female thread NPT	Male thread NPT			
		1/8	1/4	3/8	1/2
AKB01□	1/8	●			
AKB02□	1/4		●		
AKB03□	3/8			●	
AKB04□	1/2				●



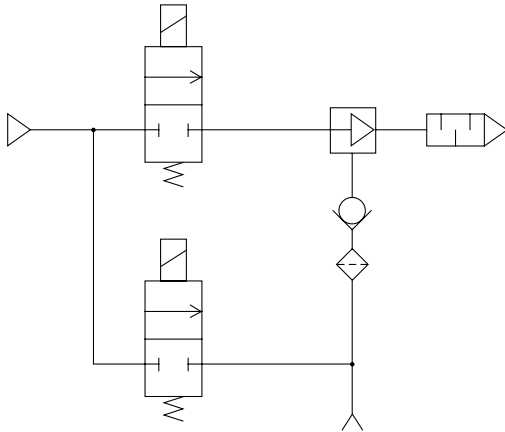
Specifications

Fluid	Air
Proof pressure	1.5MPa (217.5psi)
Operating pressure range	- 100kPa to 1MPa (-14.5 to 145psi)
Cracking pressure	0.005MPa (0.7psi)
Ambient and fluid temperature	- 5 to 60°C (23 to 140°F) (with no freezing)
Applicable tube material ^{Note 1)}	Nylon, Soft nylon, Polyurethane

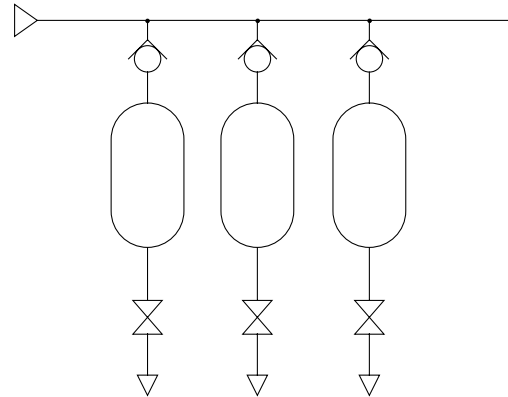
Note 1) Use caution at the maximum operating pressure with soft nylon and polyurethane. (Refer to CAT.E501-⑧ "Air Fittings and Tubing" for details.)

Application Examples for Check Valve with One-Touch Fitting

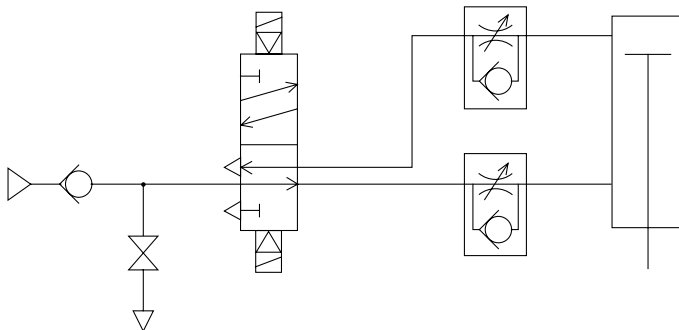
Prevention of reverse flow to vacuum source *
(simple vacuum holding)



Tank pressure reverse flow prevention



Drop prevention *

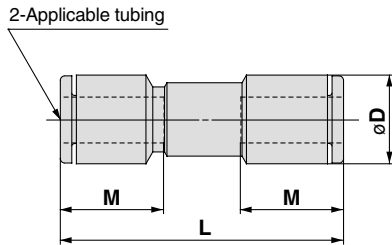


* A certain amount of leakage is allowed in the specifications of this product. Please note that it is not suitable for holding over an extended period of time.

Dimensions (mm)

1in=25.4mm

Straight Type: AKH



Millimeter Size

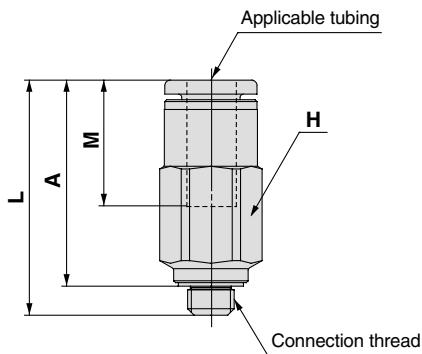
Applicable tube O.D.	Model	øD	L	M	Effective area (mm ²)	Weight g
4	AKH04-00	9.3	33.5	12.7	2.8	3
6	AKH06-00	11.6	37.1	13.5	6.5	5
8	AKH08-00	15.2	53.3	18.5	14	10
10	AKH10-00	18.5	63.6	21	24	17
12	AKH12-00	21.7	70.2	22	34	25

Inch Size

Applicable tube O.D.	Model	øD	L	M	Effective area (mm ²)	Weight g
5/32	AKH03-00	9.3	33.5	12.7	2.8	3
1/4	AKH07-00	12	39	13.6	6.5	6
5/16	AKH09-00	15.2	53.3	18.5	14	10
3/8	AKH11-00	18.5	63.6	21	24	17
1/2	AKH13-00	21.7	70.2	22	34	24

Male Connector Type: AKH

<For M5, UNF10-32>

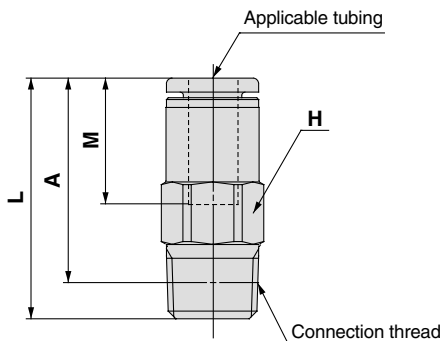


Millimeter Size

Applicable tube O.D.	Connection thread R	Model	H (Width across flats)	L	A *	M	Effective area (mm ²)	Weight g
4	M5 x 0.8	AKH04□-M5	8	24.3	21.2	12.7	2.8	5
	1/8	AKH04□-01S	10	24.6	20.6			10
6	M5 x 0.8	AKH06□-M5	10	25.8	22.2	13.5	2.8	8
		1/8		AKH06□-01S	26.9			
	1/4	AKH06□-02S	14	30	24		17	6.5
8	1/8	AKH08□-01S	14	31.7	27.7	18.5	6.5	16
	1/4	AKH08□-02S		42	36			
	3/8	AKH08□-03S	17				35.5	43
10	1/4	AKH10□-02S	17	54.3	48.3	21	24	45
	3/8	AKH10□-03S		47.3	40.8			
	1/2	AKH10□-04S	22	49.3	41.3		80	
12	3/8	AKH12□-03S	19	60.5	54	22	34	62
	1/2	AKH12□-04S	22	54.5	46.5			80

* Reference dimension after screwing into R threads.

<For R, NPT>



Inch Size

Applicable tube O.D.	Connection thread NPT	Model	H (Width across flats)	L	A *	M	Effective area (mm ²)	Weight g
5/32	10-32 UNF	AKH03□-U10/32	8	24.3	21.2	12.7	2.8	5
	1/8	AKH03□-N01S	11.11	24.6	20.6			10
1/4	10-32 UNF	AKH07□-U10/32	11.11	25.8	22.7	13.6	2.8	10
		1/8		AKH07□-N01S	26.9			
	1/4	AKH07□-N02S	14.29	31	25		17	6.5
5/16	1/8	AKH09□-N01S	14.29	31.7	27.7	18.5	6.5	16
	1/4	AKH09□-N02S		42	36			
	3/8	AKH09□-N03S	17.46				35.5	43
3/8	1/4	AKH11□-N02S	17.46	54.2	48.3	21	24	47
	3/8	AKH11□-N03S		47.2	40.7			
	1/2	AKH11□-N04S	22.23	49.2	41.2		79	
1/2	3/8	AKH13□-N03S	22.23	60.5	54	22	34	87
	1/2	AKH13□-N04S		54.5	46.5			85

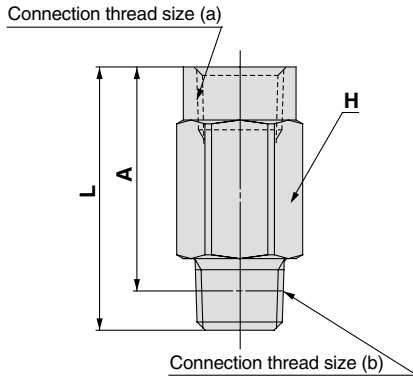
* Reference dimension after screwing into NPT threads.

Note: 1in = 25.4mm
18mm² = 1Cv
1g = 0.0353oz

Dimensions (mm)

1in=25.4mm

Bushing Type: AKB



Millimeter Size

Connection thread size R		Model	H	L	A *	Effective area (mm ²)	Weight g
(a)	(b)						
1/8	1/8	AKB01□-01S	14	23.7	19.7	6.5	18
1/4	1/4	AKB02□-02S	17	39.8	33.8	14	44
3/8	3/8	AKB03□-03S	22	45.2	38.7	24	86
1/2	1/2	AKB04□-04S	24	56.2	48.2	34	113

* Reference dimension after screwing into R threads.

Inch Size

Connection thread size NPT		Model	H	L	A *	Effective area (mm ²)	Weight g
(a)	(b)						
1/8	1/8	AKB01□-N01S	14.29	24.2	20.2	6.5	18
1/4	1/4	AKB02□-N02S	17.46	40	34	14	44
3/8	3/8	AKB03□-N03S	22.23	44.9	38.4	24	86
1/2	1/2	AKB04□-N04S	23.81	55.5	47.5	34	113

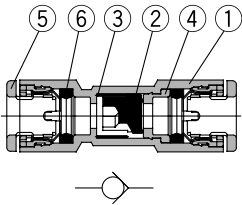
* Reference dimension after screwing into NPT threads.

Note: 1in = 25.4mm
 8mm² = 1Cv
 1g = 0.0353oz

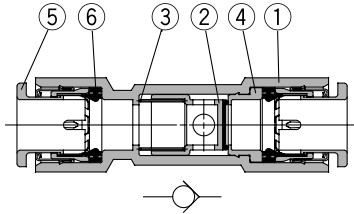
Construction

Straight type: AKH

ø4, ø6
ø5/32, ø1/4



ø8, ø10, ø12
ø5/16, ø3/8, ø1/2



Parts list

No.	Description	Material	Note
1	Body	PBT	
2	Valve	NBR, Aluminum alloy	
3	Spring	Stainless steel	
4	Spacer	Brass	Electroless nickel plated
5	Cassette	-	
6	Seal	NBR	

Male Connector Type: AKH

	M5 type U10/32	ø4, ø6 ø8 x R 1/8 ø5/32, ø1/4 ø5/16 x NPT 1/8	ø8, ø10, ø12 ø5/16, ø3/8, ø1/2
Free flow Fitting ↑ Male thread			
Free flow Fitting ↓ Male thread			

Parts list

No.	Description	Material	Note
1	Body	Brass	Electroless nickel plated
2	Valve	NBR, Aluminum alloy	
3	Spring	Stainless steel	
4	Spacer	Brass	Electroless nickel plated
5	Stopper	Stainless steel	
6	O-ring	NBR	
7	Cassette	-	
8	Seal	NBR	
9	Gasket	Stainless steel + NBR	

Bushing Type: AKB

	R 1/8 NPT 1/8	R 1/4, 3/8, 1/2 NPT 1/4, 3/8, 1/2
Free flow Female thread ↑ Male thread		
Free flow Female thread ↓ Male thread		

Auto Switch
D-B7/B8
D-G7/K7

Parts list

No.	Description	Material	Note
1	Body	Brass	Electroless nickel plated
2	Valve	NBR, Aluminum alloy	
3	Spring	Stainless steel	
4	Spacer	Brass	Electroless nickel plated
5	Stopper	Stainless steel	
6	O-ring	NBR	