

Check Valve with One-touch Fitting Series *AKH/AKB*

How to Order

Straight type **AKH** **04** — **00**

Male connector type **AKH** **04** **A** — **01** **S**

Applicable tubing O.D.

Metric size	Inch size
04 $\phi 4$	03 $\phi 5/32$
06 $\phi 6$	07 $\phi 1/4$
08 $\phi 8$	09 $\phi 5/16$
10 $\phi 10$	11 $\phi 3/8$
12 $\phi 12$	13 $\phi 1/2$

• **With seal (Standard)**
* M5 and 10-32 UNF types are not required.

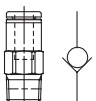
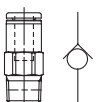
• **Thread type**

Nil	Metric thread (M5)
	Unified thread (10-32 UNF)
	R
N	NPT

• **Port size**

M5	M5 x 0.8
U10/32	10-32 UNF
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 Tubing O.D./Port Size Combinations

Metric size

Model	Applicable tubing O.D.	R thread				
		M5	1/8	1/4	3/8	1/2
AKH04 □	$\phi 4$	●	●			
AKH06 □	$\phi 6$	●	●	●		
AKH08 □	$\phi 8$		●	●	●	
AKH10 □	$\phi 10$			●	●	●
AKH12 □	$\phi 12$				●	●

Inch size

Model	Applicable tubing O.D.	NPT thread				
		10-32 UNF	1/8	1/4	3/8	1/2
AKH03 □	$\phi 5/32$	●	●			
AKH07 □	$\phi 1/4$	●	●	●		
AKH09 □	$\phi 5/16$		●	●	●	
AKH11 □	$\phi 3/8$			●	●	●
AKH13 □	$\phi 1/2$				●	●

Bushing type **AKB** **01** **A** — **01** **S**

• **Body size**

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

• **With seal (Standard)**

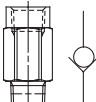
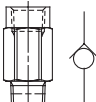
• **Port size**

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

• **Thread type**

Nil	R
N	NPT

• **Check valve free flow direction**

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

Female/Male Threads Combinations

R thread

Model	Female thread Rc	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				●

Check Valve with One-touch Fitting Series **AKH/AKB**



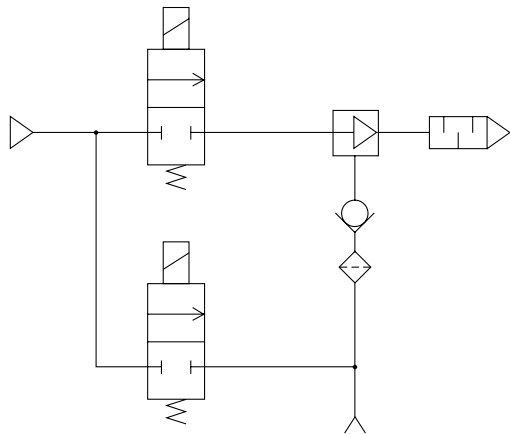
Specifications

Fluid	Air
Proof pressure	1.5 MPa
Operating pressure range	-100 kPa to 1 MPa
Cracking pressure	0.005 MPa
Ambient temperature and operating fluid temperature	-5 to 60°C (No freezing)
Applicable tubing material ^{Note)}	Nylon, Soft nylon, Polyurethane

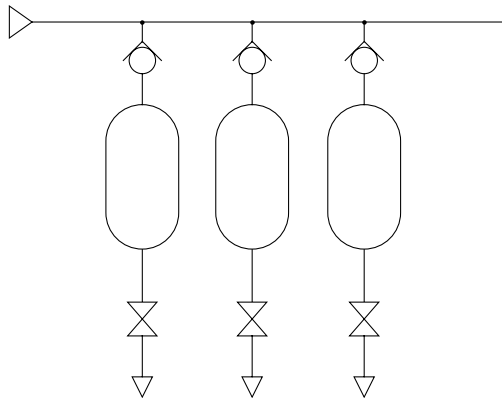
Note) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used.
(Refer to pages 15-6-3 to 15-6-5 for details.)

Application Example for Check Valve with One-touch Fitting

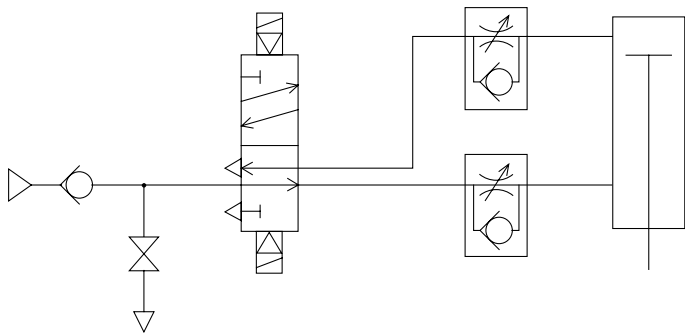
Prevention of reverse flow to vacuum source *
(Simple vacuum holding)



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.

⚠ Caution

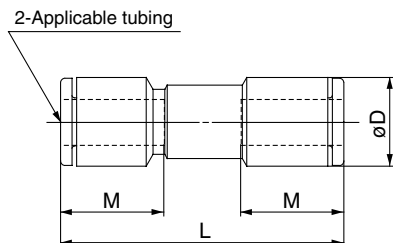
Be sure to read before handling. Refer to pages 15-18-3 to 15-18-4 for Safety Instructions and Common Precautions on the products mentioned in this catalog, and refer to pages 15-8-6 to 15-8-8 for Precautions on every series.

- AS
- ASP
- ASN
- AQ
- ASV
- AK**
- ASS
- ASR
- ASF

Series AKH/AKB

Dimensions

Straight type: AKH



Metric Size

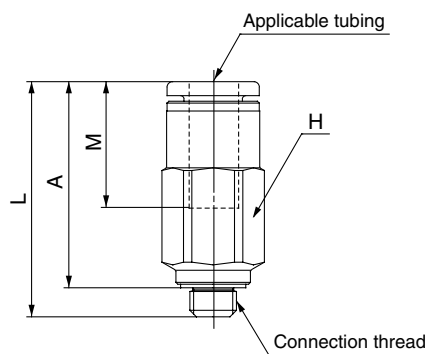
Applicable tubing O.D.	Model	øD	L	M	Effective area (mm ²)	Weight (g)
4	AKH04-00	9.3	33.5	12.7	2.8	3
6	AKH06-00	11.6	37.1	13.5	6.5	5
8	AKH08-00	15.2	53.3	18.5	14	10
10	AKH10-00	18.5	63.6	21	24	17
12	AKH12-00	21.7	70.2	22	34	25

Inch Size

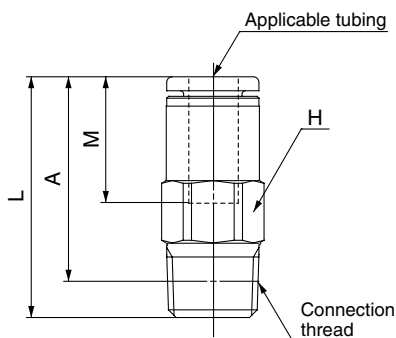
Applicable tubing O.D.	Model	øD	L	M	Effective area (mm ²)	Weight (g)
5/32	AKH03-00	9.3	33.5	12.7	2.8	3
1/4	AKH07-00	12	39	13.6	6.5	6
5/16	AKH09-00	15.2	53.3	18.5	14	10
3/8	AKH11-00	18.5	63.6	21	24	17
1/2	AKH13-00	21.7	70.2	22	34	24

Male connector type: AKH

<For M5, UNF10-32>



<For R, NPT>



Metric Size

Applicable tubing O.D.	Connection thread R	Model	H (Hexagon 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	10	26.9	22.9		6.5	
	1/4	AKH06□-02S	14	30	24		6.5	22
8	1/8	AKH08□-01S	14	31.7	27.7	18.5	6.5	16
	1/4	AKH08□-02S	14	42	36			24
	3/8	AKH08□-03S	17	42	35.5			43
10	1/4	AKH10□-02S	17	54.3	48.3	21	24	45
	3/8	AKH10□-03S	17	47.3	40.8			39
	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

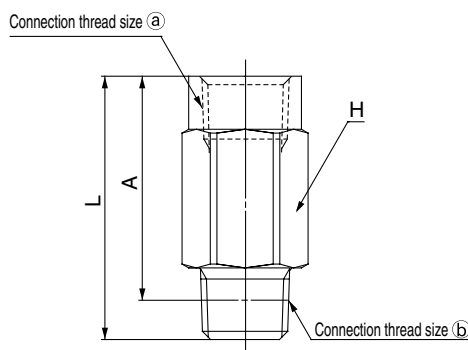
* Reference dimensions of R thread after installation.

Inch Size

Applicable tubing O.D.	Connection thread NPT	Model	H (Hexagon 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	11.11	26.9	22.9		6.5	11
	1/4	AKH07□-N02S	14.29	31	25		6.5	18
5/16	1/8	AKH09□-N01S	14.29	31.7	27.7	18.5	6.5	16
	1/4	AKH09□-N02S	14.29	42	36			24
	3/8	AKH09□-N03S	17.46	42	35.5			43
3/8	1/4	AKH11□-N02S	17.46	54.2	48.3	21	24	47
	3/8	AKH11□-N03S	17.46	47.2	40.7			40
	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	22.23	54.5	46.5			85

* Reference dimensions of NPT thread after installation.

Bushing type: AKB



Metric 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 dimensions of R thread after installation.

Inch Size

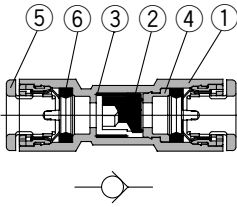
Connection thread size NPT		Model	H	L	A *	Effective area (mm ²)	Weight (g)
(a)	(b)						
1/8	1/8	AKB01□-N01S	14.29	24.2	20.2	6.5	18
1/4	1/4	AKB02□-N02S	17.46	40	34	14	44
3/8	3/8	AKB03□-N03S	22.23	44.9	38.4	24	86
1/2	1/2	AKB04□-N04S	23.81	55.5	47.5	34	113

* Reference dimensions of NPT thread after installation.

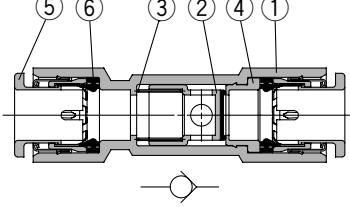
Construction

Straight type: AKH

ø4, ø6
ø5/32, ø1/4



ø8, ø10, ø12
ø5/16, ø3/8, ø1/2



Component Parts

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 × R 1/8 ø5/32, ø1/4 ø5/16 × NPT 1/8	ø8, ø10, ø12 ø5/16, ø3/8, ø1/2
Free flow One-touch fitting ↓ Male thread			
Free flow One-touch fitting ↓ Male thread			

Component Parts

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		

Component Parts

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	

AS

ASP

ASN

AQ

ASV

AK

ASS

ASR

ASF