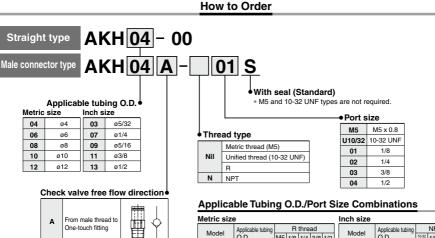
# Bushing Type Check Valve with One-touch Fittings AKH/AKB Series

RoHS



Model	Applicable tubing		R	thre	ad		ſ	Model	Applicable tubing	NPT thread				
Woder	O.D.	M5	1/8	1/4	3/8	1/2	woder		O.D.	10-32 UNF	1/8	1/4	3/8	1/2
AKH04	ø4	۲	•					AKH03	ø5/32	۲	۲			
AKH06	ø6	٠	٠	٠				AKH07	ø1/4	٠	٠	٠		
AKH08	ø8		٠	۲	٠			AKH09	ø5/16		٠	۲	٠	
AKH10	ø10			۲	٠			AKH11	ø3/8			۲	٠	
AKH12	ø12				٠	•	1	AKH13	ø1/2				٠	•

#### AKB 01 A - 01 S **Bushing type** Body size Port size 01 1/8 01 02 1/4 Thread type 02 3/8 03 Nil R 03 04 1/2 Ν NPT 04

FŤ

#### Check valve free flow direction

From One-touch

fitting to male thread

в

A	From male to female thread	
в	From female to male thread	

## With seal (Standard) 1/81/4 3/8 1/2

#### Female/Male Threads Combinations

R thread						NPT thread							
Model	Female thread	Ma	le th	nrea	d R	Model	Female thread	Mal	e thr	ead I	NPT		
wouer	Rc	1/8	1/4	3/8	1/2	wouer	NPT	1/8	1/4	3/8	1/2		
AKB01	1/8	•				AKB01	1/8	•					
AKB02	1/4		٠			AKB02	1/4		٠				
AKB03	3/8			۲		AKB03	3/8			٠			
AKB04□	1/2				٠	AKB04	1/2				٠		

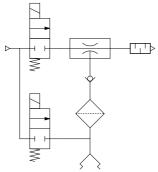


Specifications
----------------

Specifications						
Fluid	Air					
Proof pressure	1.5 MPa					
Operating pressure range	–100 kPa to 1 MPa					
Cracking pressure	0.005 MPa Note 1)					
Ambient temperature and operating fluid temperature	-5 to 60°C (No freezing)	AS-F				
Applicable tubing material Note 2)	Nylon, Soft nylon, Polyurethane	ТМН				
Note 1) The valve does not open fully at this pressu	re level.					
Note 2) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used.						
(Refer to pages 464 and 465 for details.)						
		AS				
		_				

### Application Example for Bushing Type Check Valve with One-touch Fittings

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



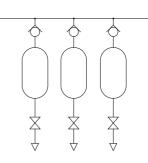
#### Tank pressure reverse flow prevention

AS-FE

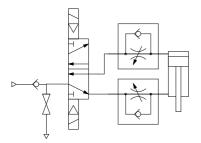
KE

AS-FG AS-FP AS-FM AS-D AS-T ASP ASN AQ ASV AK

VCHC ASR ASQ



## **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.

## A Specific Product Precautions

Be sure to read this before handling the products.
Refer to back page 50 for Safety Instructions and pages I
543 to 546 for Flow Control Equipment Precautions.

#### Design/Selection

## Caution

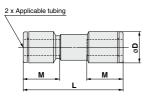
- 1. Even when using with the specification range listed in the catalog, when the IN side of the check valve is throttled, it may fail to open all the way and may generate vibration.
- 2. The cracking pressure is the pressure when the valve begins to open, and not the pressure when the valve is fully open.
- 3. The check valve has a construction, in which it is closed by the differential pressure generated when the inlet pressure (IN side) or outlet pressure (OUT side) solenoid valve is switched. Be aware that the check valve does not close completely and the outlet pressure (OUT side) may drop when the inlet pressure (IN side) drops gently and the differential pressure becomes smaller than the minimum operating pressure or cracking pressure.
- 4. It can not be sealed of valve by only built-in spring, so please use in an environment where differential pressure is generated.
- 5. Check valve can not be used for relief valve applications. Please use pressure control valve. 789 A



## AKH/AKB Series

#### Dimensions

#### Straight type: AKH



Metric Siz	e										
Applicable tubing O.D.	Model	øD	L	м	Sonic conductance dm3/(s·bar)	Critical pressure ratio	Weight (g)				
4	AKH04-00	9.3	33.5	12.7	0.56	0.35	3				
6	AKH06-00	11.6	37.1	13.5	1.3	0.35	5				
8	AKH08-00	15.2	53.3	18.5	2.8		10				
10	AKH10-00	18.5	63.6	21	4.8	0.5	17				
12	AKH12-00	21.7	70.2	22	6.8		25				
nch Size											
Applicable tubing O.D.	Model	øD	L	м	Sonic conductance dm3/(s·bar)	Critical pressure ratio	Weight (g)				

33.5

53.3

63.6

70.2

39

12.7

13.6

18.5

21

22

0.56

1.3

2.8

4.8

6.8

0.35

0.5

3

6

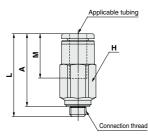
10

17

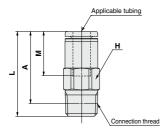
24

#### Male connector type: AKH

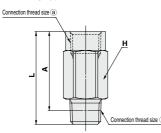
<For M5, UNF10-32>



#### <For R, NPT>



#### **Bushing type: AKB**



Connection thread R	Model	<b>H</b> (Hexagon width across flats)	L	<b>A</b> *	м	Sonic conductance dm³/(s·bar)	Critical pressure ratio	Weight (g)
M5 x 0.8	AKH04 🗆 - M5	8	24.3	21.2	10.7	0.56		5
1/8	AKH04 -01S	10	24.6	20.6	12.7	0.56		10
M5 x 0.8	AKH06 - M5	10	25.8	22.2	12.5	0.56	0.05	8
1/8	AKH06 -01S	10	26.9	22.9	13.5	1.3	0.35	0
1/4	AKH06 -02S	14	30	24	17	1.3		22
1/8	AKH08 -01S	14	31.7	27.7		1.3		16
1/4	AKH08 -02S	14	40	36	18.5	2.8	0.5	24
3/8	AKH08 -03S	17	42	35.5				43
1/4	AKH10 -02S	17	54.3	48.3				45
3/8	AKH10 -03S	17	47.3	40.8	21	4.8		39
1/2	AKH10 -04S	22	49.3	41.3				80
3/8	AKH12 -03S	19	60.5	54	00	6.0		62
1/2	AKH12 -04S	22	54.5	46.5	22	0.8		80
	R M5 x 0.8 1/8 M5 x 0.8 1/8 1/4 1/8 1/4 3/8 1/4 3/8 1/4 3/8 1/2 3/8	R         Model           M5 x 0.8         AKH04M5           1/8         AKH06015           1/8         AKH06015           1/4         AKH06015           1/4         AKH08015           1/4         AKH08015           1/4         AKH08035           1/4         AKH08035           1/4         AKH08035           1/4         AKH08035           1/4         AKH08035           1/4         AKH01035           3/8         AKH10035           1/2         AKH10035           3/8         AKH12035	Model         Medgin with screen fails           M         Model         Medgin with screen fails           M5 x 0.8         AKH04 - MS         8           1/8         AKH06 - 01S         10           1/8         AKH06 - 01S         10           1/4         AKH06 - 01S         14           1/4         AKH08 - 02S         14           1/4         AKH08 - 03S         17           3/8         AKH01 - 03S         17           3/8         AKH10 - 03S         17           3/8         AKH12 - 03S         19           3/8         AKH12 - 03S         19	Model         Prespiration         L           R         M5x0.8         AKH04CI-M5         8         24.3           1/8         AKH04CI-M5         8         24.6           M5x0.8         AKH04CI-M5         10         24.6           M5x0.8         AKH06CI-M5         10         26.8           1/8         AKH06CI-025         14         30           1/4         AKH06CI-025         14         31.7           1/4         AKH08CI-025         14         31.7           3/8         AKH08CI-025         14         42           3/8         AKH08CI-025         14         42           3/8         AKH08CI-025         17         54.3           3/8         AKH10CI-035         27         47.3           3/8         AKH10CI-035         19         60.5	No.8         AKH04 Model         Perpiption         L         A*           M5 x 0.8         AKH04 M         M5         8         24.3         21.2           1/8         AKH04 M         M5         8         24.6         20.6           1/8         AKH06 M         M5         0         24.6         20.6           1/4         AKH06 M         10         26.9         22.9           1/4         AKH08 M         14         30.2         24.7           1/8         AKH08 M         14         30.2         24.7           1/4         AKH08 M         14         31.7         27.7           1/4         AKH08 M         14         31.7         26.9           3/8         AKH08 M         14         31.7         27.7           1/4         AKH08 M         14         31.7         27.7           3/8         AKH01 M         23.7         35.5         35.5           1/4         AKH08 M         17         54.3         48.3           3/8         AKH10 M         22         49.3         41.3           3/8         AKH12 M         23         19.3         60.5	Model         Magnetic bit	Non-control         Model         Heads into         L         A*         M         Microbiological officiency           M5 x 0.8         AKH04CI-MS         8         24.3         21.2         12.7         0.56           M5 x 0.8         AKH04CI-MS         10         24.6         20.6         12.7         0.56           M5 x 0.8         AKH04CI-MS         10         25.8         22.2         13.5         1.3           1/8         AKH06CI-OS         10         26.9         22.9         13.5         1.3           1/4         AKH06CIOS         14         30.7         27.7         1.3         1.3           1/4         AKH08CI-OSS         14         31.7         27.7         1.3         1.3           3/8         AKH08CI-OSS         17         54.3         48.5         2.8         2.8           3/8         AKH10CI-OSS         17         54.3         48.8         1         4.8           1/2         AKH10CI-O3S         19         60.5         54         22         6.8	KHOGE         Model analities         Model matrix         Mage by annihis         M         Solid Computative off(124)         Pressure and 124           M5 x 0.8         AKH04CI-M5         8         24.3         21.2         12.7         0.56           1/8         AKH04CI-M5         10         25.8         22.2         13.5         1.3           1/8         AKH06CI-015         10         25.8         22.2         13.5         1.3           1/4         AKH06CI-025         14         30.7         27.7         1.3         1.3           1/4         AKH08CI-025         14         30.7         27.7         1.3         1.3           1/4         AKH08CI-025         14         36.5         18.5         2.8         3.6           3/8         AKH00CI-025         17         54.3         48.3         21         4.8           3/8         AKH10CI-025         17         54.3         48.3         21         4.8           1/2         AKH10CI-035         17         43.3         41.3         33         4.8

#### Inch Size

Matula 0:---

5/32

1/4

5/16

3/8

1/2

Metric Size

AKH03-00

AKH07-00

AKH09-00

AKH11-00

AKH13-00

9.3

12

15.2

18.5

21.7

\* Reference dimensions of R thread after installation.

Applicable tubing O.D.	Connection thread NPT	Model	H (Hexagon width across flats)	L	<b>A</b> *	м	Sonic conductance dm <sup>3</sup> /(s·bar)	Critical pressure ratio	Weight (g)
5/32	10-32 UNF	AKH03 🗆 - U10/32	8	24.3	21.2	12.7	0.56		5
5/32	1/8	AKH03 -N01S	11.11	24.6	20.6	12.7	0.56		10
	10-32 UNF	AKH07 🗆 - U10/32	11.11	25.8	22.7	13.6	0.56	0.35	10
1/4	1/8	AKH07 -N01S	11.11	26.9	22.9	13.0	1.3		11
	1/4	AKH07 -N02S	14.29	31	25	17	1.3		18
	1/8	AKH09 -N01S	14.29	31.7	27.7	18.5	1.3		16
5/16	1/4	AKH09 -N02S	14.29	42	36		2.8	0.5	24
	3/8	AKH09 -N03S	17.46	42	35.5		2.8		43
	1/4	AKH11 -N02S	17.46	54.2	48.3				47
3/8	3/8	AKH11 -N03S	17.40	47.2	40.7	21	4.8		40
	1/2	AKH11 -N04S	22.23	49.2	41.2				79
1/0	3/8	AKH13 -N03S	22.23	60.5	54	22	6.8		87
1/2	1/2	AKH13 -N04S	22.23	54.5	46.5	22	0.8		85

Metric Size

Connection thread size R		Model	н		A*	Sonic conductance	Critical pressure	Weight	
(a)	b	woder			~	dm³/(s·bar)	ratio	(g)	
1/8	1/8	AKB01   -01S	14	23.7	19.7	1.3	0.35	18	
1/4	1/4	AKB02 -02S	17	39.8	33.8	2.8		44	
3/8	3/8	AKB03 -03S	22	45.2	38.7	4.8	0.5	86	
1/2	1/2	AKB04 -04S	24	56.2	48.2	6.8		113	
				* Reference dimensions of R thread after installatio					

#### Inch Size

	Connection thread size NPT		Model	н	L	A *	Sonic conductance	Critical pressure	Weight
	a	b					dm³/(s·bar)	ratio	(g)
	1/8	1/8	AKB01 -N01S	14.29	24.2	20.2	1.3	0.35	18
	1/4	1/4	AKB02 -N02S	17.46	40	34	2.8		44
و	3/8	3/8	AKB03 -N03S	22.23	44.9	38.4	4.8	0.5	86
	1/2	1/2	AKB04 -N04S	23.81	55.5	47.5	6.8		113

\* Reference dimensions of NPT thread after installation.



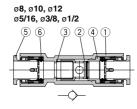
## Best Pneumatics 7 Ver.6

#### Construction

#### Straight type: AKH

ø4, ø6 ø5/32, ø1/4

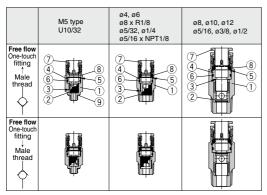




#### **Component Parts**

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

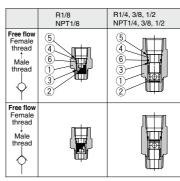
#### Male connector type: AKH



#### **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



#### **Component Parts**

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