

Cat.No. C-023a



**Quick-action Couplings for Air**

# Full-Blow Cupla

**FBH CUPLA SERIES**

**New!**

Energy-saving design for new pneumatic system.  
Up to about **40%** increase in flow rate.



# Low pressure loss & high flow rate Full-open ball-type valve designed

# Full-Blow Cupla

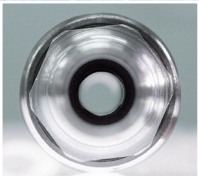


## Easy connection

The connection to a plug is very easy.  
It is not affected any residual air pressure.  
After connection, open the Built-in valve  
by sliding outside sleeve.

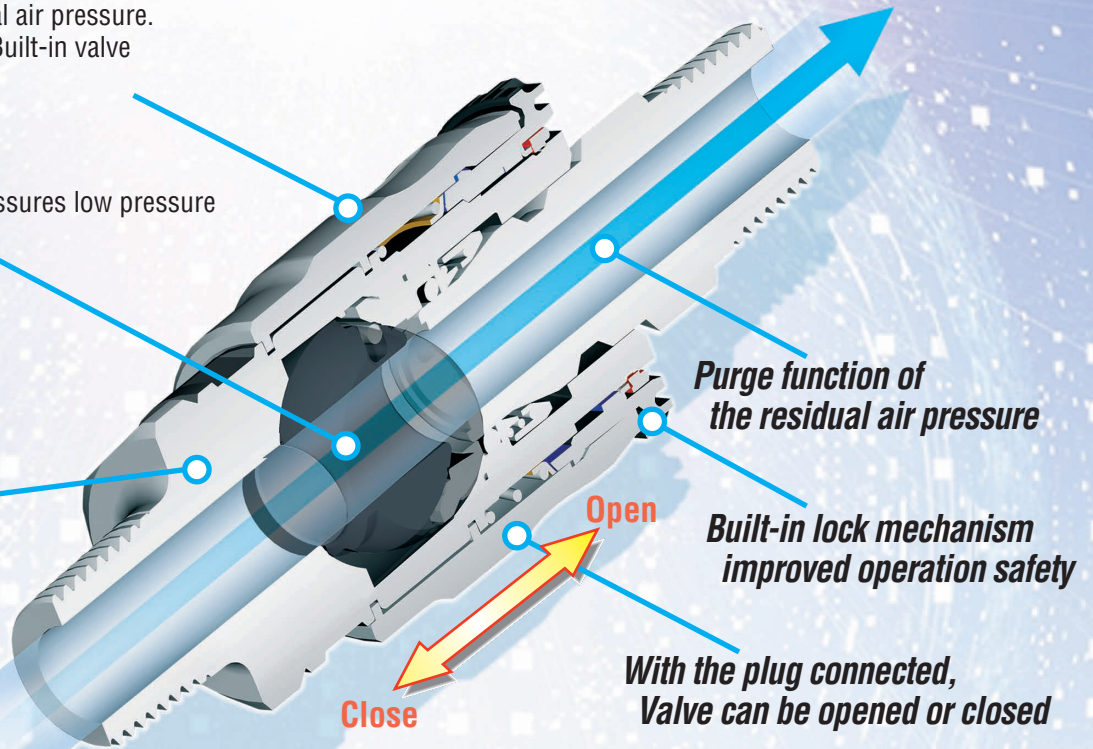
## Full-open type valve

Unique valve construction assures low pressure  
loss and high flow rate.

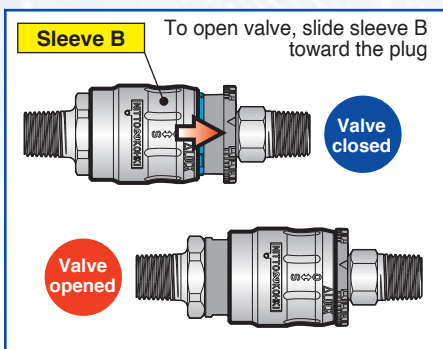


## Lightweight

The weight (mass) is  
30 to 45% lighter than  
conventional Cuplas.

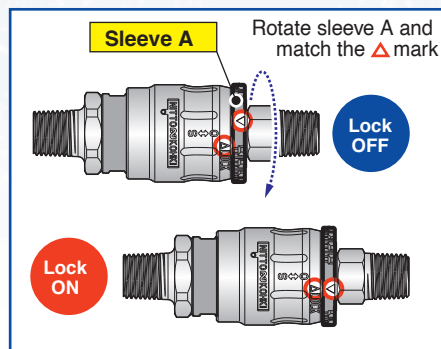


## How it works



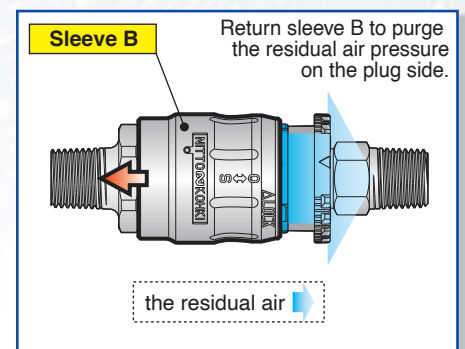
### Valve open or close operation

The valve can be opened and closed  
while the Cupla is connected.  
After the connection to the plug, slide  
sleeve B to open the built-in valve.  
Full flow path is then obtained.  
Slide sleeve B to the original  
position and the flow path closes.



### Built-in lock operation

Slide sleeve B towards plug.  
Rotate sleeve A to lock.  
The sleeve lock function prevents  
unexpected disconnection.



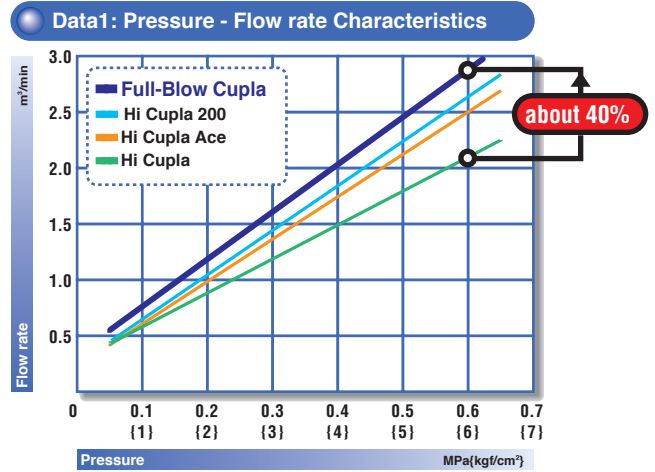
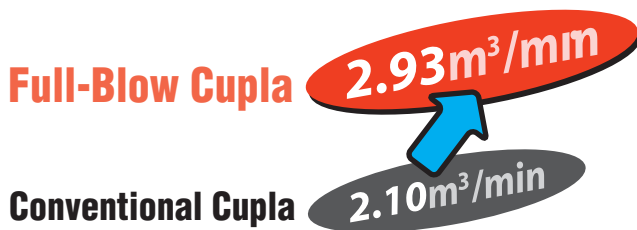
### Purge operation

Closing the valve slide sleeve B to  
open position. Relieves the residual air  
from the plug side.  
Reduces risk of hose whip.

# Energy-saving design for establishing a new pneumatic system

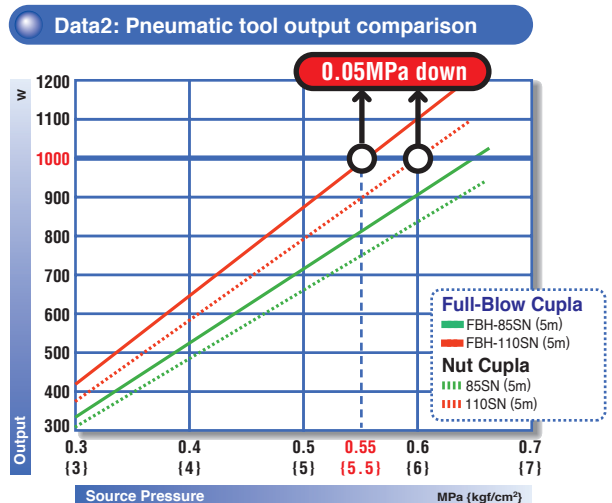
## Flow rate up to 40% increase

The "Full-Blow Cupla" minimizes pressure loss and offers a flow rate up to 40% higher than conventional Cuplas.  
As show in the chart, at 0.6 MPa source pressure, Full-Blow Cupla performs flow rate of 2.93m<sup>3</sup>/min compare to conventional cupla's 2.10m<sup>3</sup>/min. (Reference data)

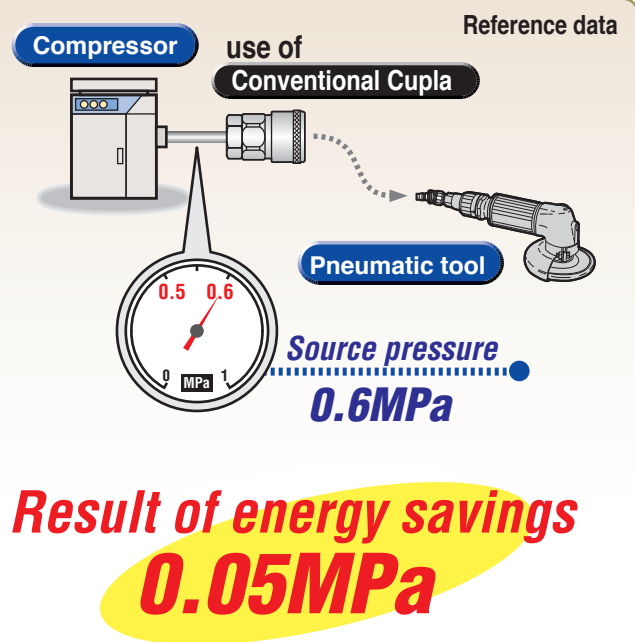
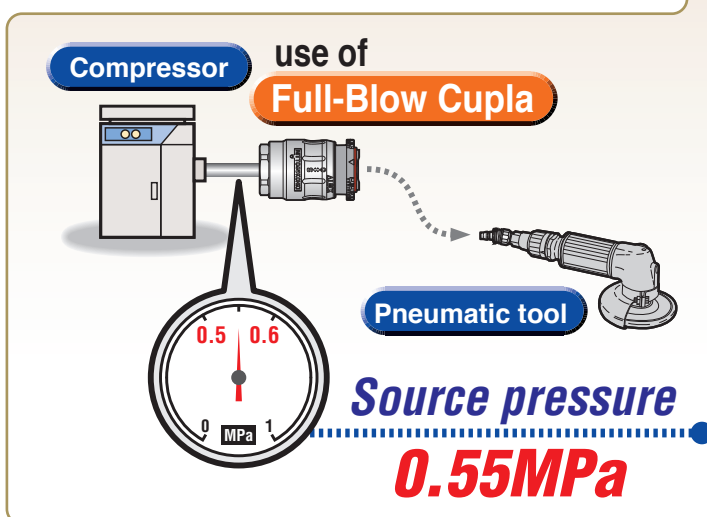


## Effects of energy savings

Using Full-Blow Cupla lowers usage of compressor power and results in lower cost using 1000(W) pneumatic tool, a conventional Cupla requires 0.6 MPa. Switching to Full-Blow Cupla reduces needed pressure to 0.55 MPa.  
Required source pressure reduced by 0.05 MPa. This reduces needed air consumption by 7%, a 2.5% reduction in energy expense is also achieved.



## Source pressure decrease effects produced by "Full-Blow Cupla" use



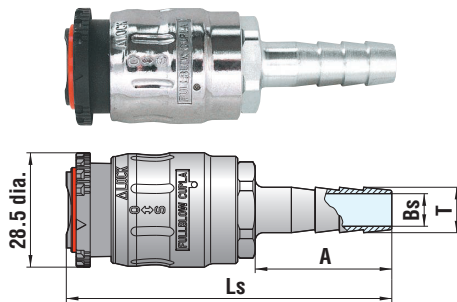
## Specifications

Applicable fluids	Air
Body material	Aluminum alloy
Working pressure * <sub>1</sub>	1.5MPa {15kgf/cm <sup>2</sup> }
Pressure resistance * <sub>2</sub>	2.0MPa {20kgf/cm <sup>2</sup> }
Packing material	Nitrile butadiene rubber
Working temperature range	-5°C ~ +60°C
Suitability for vacuum applications	Not suitable for use with vacuum, either alone or in combination.
Interchangeability	Hi Cupla Series plugs * <sub>3</sub>

- \*1) Allowable pressure when the Cupla used continuously.  
 \*2) Maximum surge pressure that will not affect the performance of the Cupla.  
 \*3) Can not be interchanged with some plastic plugs.  
 ★ Fluid flow in either direction from plug or socket.

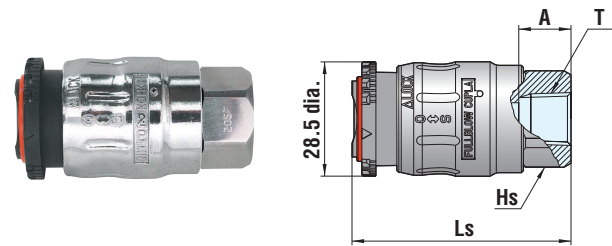
## Product Codes and Dimensions Tables

### For hose connection (SH)



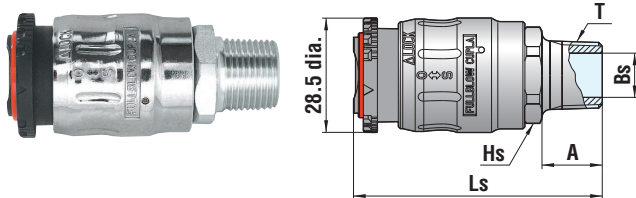
Product code	Application	Mass (g)	Dimensions (mm)			
			Ls	A	∅T	∅Bs
FBH-20SH	1/4"	70	77	30	9	5.5
FBH-30SH	3/8"	74	81	34	11.3	8
FBH-40SH	1/2"	85	83	36	15	10

### For male-thread connection (SF)



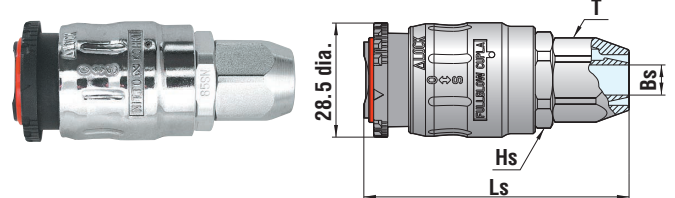
Product code	Application	Mass (g)	Dimensions (mm)			
			Ls	Hs	A	T
FBH-20SF	R 1/4	77	54.5	Hex.22	13	Rc 1/4
FBH-30SF	R 3/8	69	54.5	Hex.22	13	Rc 3/8
FBH-40SF	R 1/2	90	61	Hex.26	17	Rc 1/2

### For female-thread connection (SM)



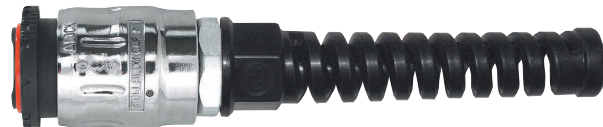
Product code	Application	Mass (g)	Dimensions (mm)				
			Ls	Hs	A	T	∅Bs
FBH-20SM	Rc 1/4	71	62	Hex.22	15	R 1/4	8
FBH-30SM	Rc 3/8	75	62	Hex.22	15	R 3/8	11
FBH-40SM	Rc 1/2	86	66	Hex.22	19	R 1/2	15

### For urethane hose connection (SN)

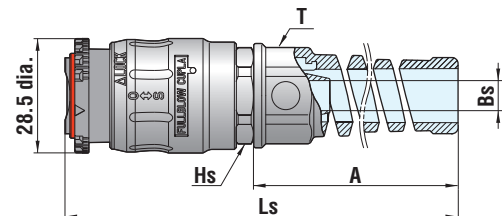


Product code	Application	Mass (g)	Dimensions (mm)			
			Ls	Hs	T	∅Bs
FBH-65SN	∅6.5x ∅10	64	64	Hex.22	Hex.17	5.5
FBH-80SN	∅8 x ∅12	67	66	Hex.22	Hex.19	7.5
FBH-85SN	∅8.5 x ∅12.5	68	66	Hex.22	Hex.19	7.5
FBH-110SN	∅11 x ∅16	86	71	Hex.26	Hex.24	10

### For urethane hose with spring nut connection (SNG) — Made to order item



Product code	Application	Mass (g)	Dimensions (mm)				
			Ls	Hs	A	T	∅Bs
FBH-65SNG	For ∅6.5mm x ∅10mm urethane hose	65	137	Hex.22	90	Hex.19	5.5
FBH-85SNG	For ∅8.5mm x ∅12.5mm urethane hose	71	137	Hex.22	90	Hex.22	7.5



\*Before using, please be sure to read the "Precaution" sheet attached to the product or the "Precautions" items on the package.  
 \*\*All design and specifications are subject to change with or without notice.

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