ISO 14001
JQA-EM4057
NITTO KOHKI Co.,LTD. Headquarters Research Center

ISO 9001
JQA-2025
NITTO KOHKI Co.,LTD. Couplings Division

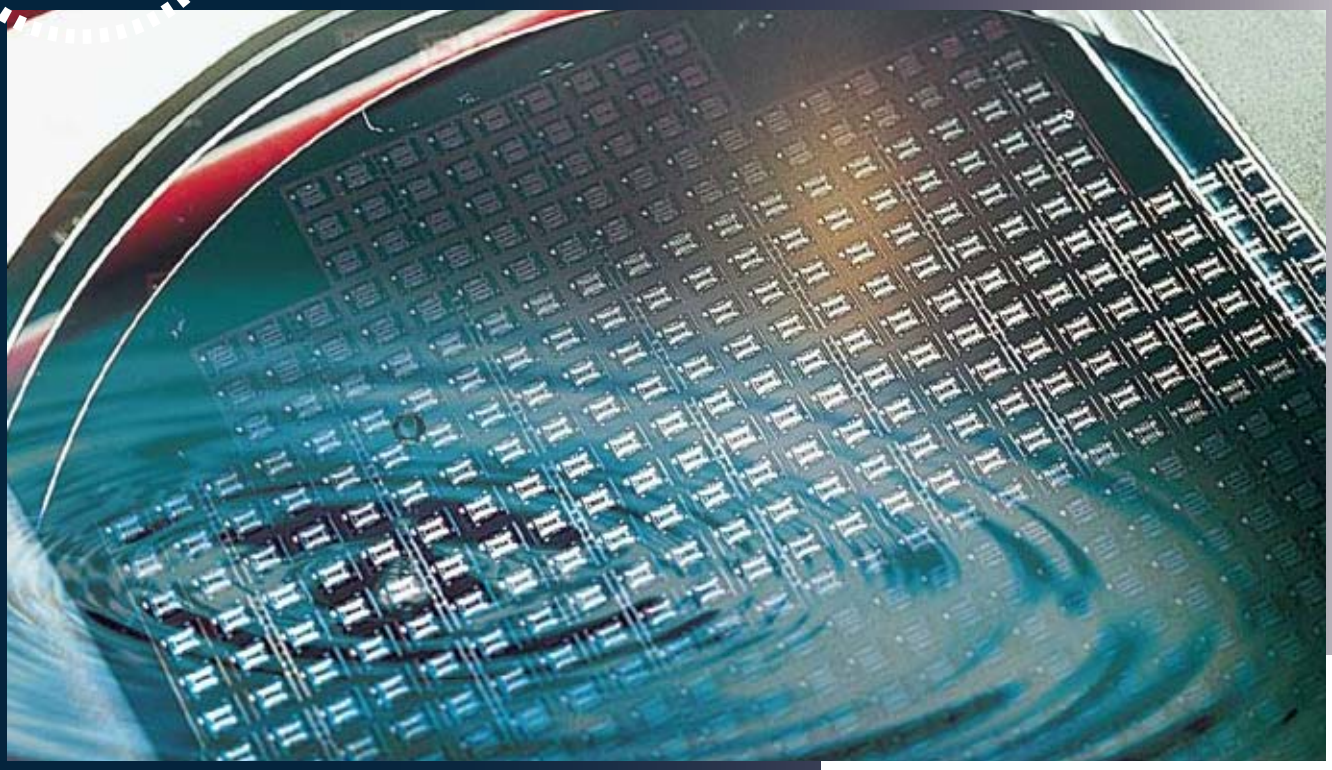
Cat.No.Ck035-w

SEMICON CUPLA SERIES

Nitto Kohki's SEMICON CUPLA series are used in piping for various chemicals for semiconductor manufacturing processes and biochemical plants.

NITTO KOHKI CO.,LTD.

SEMICON CUPLA Series



"Improved quality" is the greatest theme in the semiconductor industry, which is making remarkable technical innovations.

As various chemicals used in the manufacturing process of semiconductor ICs become purer and purer, higher quality and performance are required in CUPLA, a series of quick connect couplings used in the pipe parts.

- Chemical resistance that meets various chemicals
- Leak resistance that ensures safety
- Cost effective because of capability to withstand repeated use over long hours

Nitto Kohki takes full advantage of the know-how that it has long accumulated and its world's top-ranking expertise to meet securely the piping applications for high purity chemicals in the semiconductor industry.

Applications

- Piping for semiconductor production equipment and machinery
- Pipe connections for chemical tanks
- Piping for biotechnology equipment
- Pure water piping
- Piping for equipment for scientific, chemical, medical, and food purposes

Main applicable fluids

Pure water | Chemicals | Gas | Air

Application examples

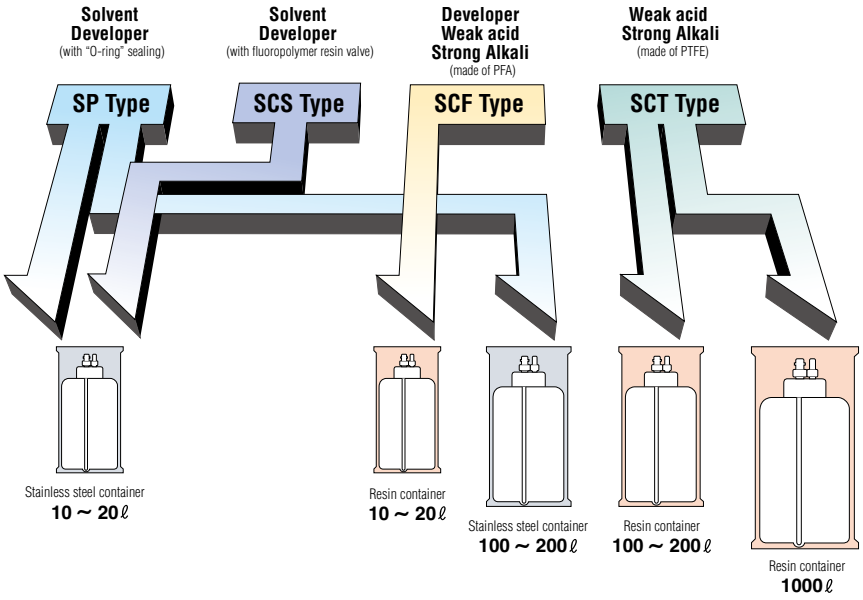
Resin containers

Stainless steel containers

200-liter polyethylene containers

Nitto Kohki responds to the needs of electronics industry with innovative ideas.

Typical Applications



Typical installations on the chemical container side (plug) and piping side (socket)

		Stainless steel container (10ℓ ~ 20ℓ)	Resin container (10ℓ ~ 20ℓ)	Stainless steel container (100ℓ ~ 200ℓ)	Resin container (100ℓ ~ 200ℓ)	Resin container (1000ℓ)
Container side (plug)	IN side	SP Type (1/8") SCS Type (1/8")	SCF Type (1/4")	SP Type (1/4" • 3/8")	SCT Type (1/4" • 3/8")	SCT Type (3/8" • 1/2")
	OUT side	SP Type (1/4") SCS Type (1/4")	SCF Type (3/8")	SP Type (1/2" • 3/4")	SCT Type (1/2" • 3/4")	SCT Type (3/4" • 1")
Piping side (socket)	IN side	SP Type (1/8") SCS Type (1/8")	SCF Type (1/4")	SP Type (1/4" • 3/8")	SCT Type (1/4" • 3/8")	SCT Type (3/8" • 1/2")
	OUT side	SP Type (1/4") SCS Type (1/4")	SCF Type (3/8")	SP Type (1/2" • 3/4")	SCT Type (1/2" • 3/4")	SCT Type (3/4" • 1")

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Standard series

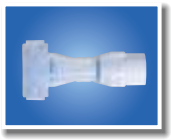
SP Type
P5-6
Body and valve springs are stainless steel (SUS304). Components are electropolished for enhanced corrosion resistance. Abundant size variation. Sealing material can be selected to suit you fluid and application.

SCS Type
P7-8
The body and spring material of stainless steel (SUS304), and valve of fluoropolymer resin are employed.

SCY Type
P9
The SCY type is another version of SCS series.
Insert load is decreased.

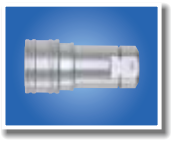
SCT Type
P11-12
Body material is polytetrafluoroethylene. The available size range is from 1/4" to 1".

SCF Type
P15-17
All components are fluororesin. Injection molding is employed to prevent the generation of particles.



SCF Straight Type
P18
The SCF straight type is another version of SCF series.
It is used as an intermediate joint.

Semi-Standard Series



SP-GN Type
P10
SP-GN type is included in SP type series. No interchangeability with SP type to prevent miss connections.

SML Type
P10
SML type is included in the SP type series. The socket is interchangeable with the SP type plug and its shape is L with male thread end configuration.

Special Made-to-Order Cupla Series

SCT-K Type
P13
SCT-K type is another version of SCT series. In response to diversification of chemicals miss connection prevention function equipped.

SCA Type
P14
Body material is polytetrafluoroethylene (PTFE).

SCE Type
P14
For 200L polyethylene container.
Plug is polyethylene.

Opening the door to the next generation by developing new technologies!

Nitto Kohki is constantly challenging the new technologies based on the vast experiences and high-grade know-how nurtured in the fields of fluid engineering.

- Research and development capabilities addressing the needs of market.
- Various patented technologies.
- Unique engineering capability.

A profusion of patented technology crystallized in global users recognition of high quality and high performance.

"Cuplas" quick connect couplings are produced as the crystallization of high-grade know-how nurtured in the fields of fluid engineering and materials engineering, and top level precision machining technology. Having assessed Nitto Kohki consistent quality assurance and control system ranging from design and development through procurement of material, manufacture, assembly, and shipping, the Japan Quality Assurance Foundation, authority for inspection and registration, awarded us "ISO 9001", international standard for quality management systems, and "ISO 14001", international standard for environment management systems intended to perform global environment preservation and pollution control. High reliability built on unparalleled "high quality" and accumulated history of "productivity" for stable supply. Cupla is receiving overwhelming support from many users spread all over the world as the top brand for fluid energy transmission and control.

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Nitto Kohki's depth of unique technologies and dedicated research has been proven by numerous patents, which led to the development of 25,000 different Cupla variations.

- Applications diversify from general household to high-tech industries such as in oceanic and space development.
- Diameters range from a tiny 1mm to a huge 540mm.
- Wide varieties of body materials such as steel, brass, plastic, aluminum or stainless steel are available.

Research and development

Tireless R & D produces high level of originality and a new generation of products.

R&D Engineers are committed to develop original and innovative products. They, with all their hearts, pursue valued labor-saving technology by means of collecting and analyzing latest market information, evaluating operating environments, and determining user's wants and needs.

Quality Control

Wining the world's confidence with material selection, precision testing and durability testing.

Many tests, measurements and experiments repeated day and night support the "making of high-quality products." For example, durability testing (where product samples are kept running under severe conditions than in actual use), along with material inspection, dimensional inspection, environmental testing, withstand pressure testing, and various other routine programs, are an obligation. In so doing, the basic performance of the products is strictly checked in many aspects.

Flow measurement testing

Inspection in clean room

Airtightness (seal material durability) testing

Durability test under diversified environments

Glossary

Refer to the following terms when checking Cupla specifications.

Body Material

This indicates the material that is used for the plug body or socket body that forms the flow path of fluid through the Cupla.

Sizes

This indicates the nominal size of the pipe thread connection.

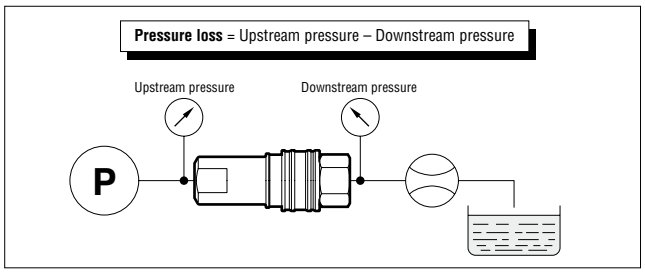
Pressure

Working pressure This shows the normal allowable fluid pressure under continuous use.

Pressure resistance This shows the maximum pressure that will not affect the preformance of the Cupla even if there is a temporary increase to reach the pressure.

Pressure Loss

This shows the loss of pressure when fluid runs through the Cupla set.



Seal Material

This shows the material used to seal the Cupla, usually an O-ring.

Working Temperature Range

This shows the minimum and maximum temperature, in-between which the Cupla with the seal material can be used. However, it does not mean that they cannot be used continuously at the minimum or maximum working temperatures. Please check with us if you need Cuplas in such extreme applications.

Automatic Shut-off Valves

This shows the structure of built-in valves that open and shut automatically on connection and disconnection.

Interchangeability

Indicate whether the plug or socket of different series, types or modles can be connected with each other.

Max. Tightening Torque

Considering the balance between possible leakage caused by loose fit and too much structural stress when a Cupla is mounted on a workpiece, the appropriate screw-in torque value is suggested by the maker.

The meaning of each letter in the model name

SP *1	1	S	– 304	– NPT	– KL	
SCS *2	– 1	S	–	NPT		

Series

Type	Symbol
SP	–
SCS	SCS
SCY	SCY
SCF	SCF
SCT	SCT
SCA	SCA
SCE	SCE

Size

Size	Symbol
1/8"	1
1/4"	2
3/8"	3
1/2"	4
3/4"	6
1"	8

Socket or Plug

Segment	Symbol
Socket	S
Plug	P

Body Material

Material	Symbol
SUS304	304
SUS316	316

Indicate on SP type only.

Thread Type

Thread	Symbol
Rc	–
NPT	NPT
UNS (19/32-18UNS)	UNS

Symbol indication of SCF type is made in different way.

Seal Material

Material	Symbol	Marking
Fluoro rubber	F	X-100 or FKM
Ethylene-propylene rubber	E	EPT or EPDM
Perfluoroelastomer	P	P
Kalrez	KL	KL

Indicate on SP type only.

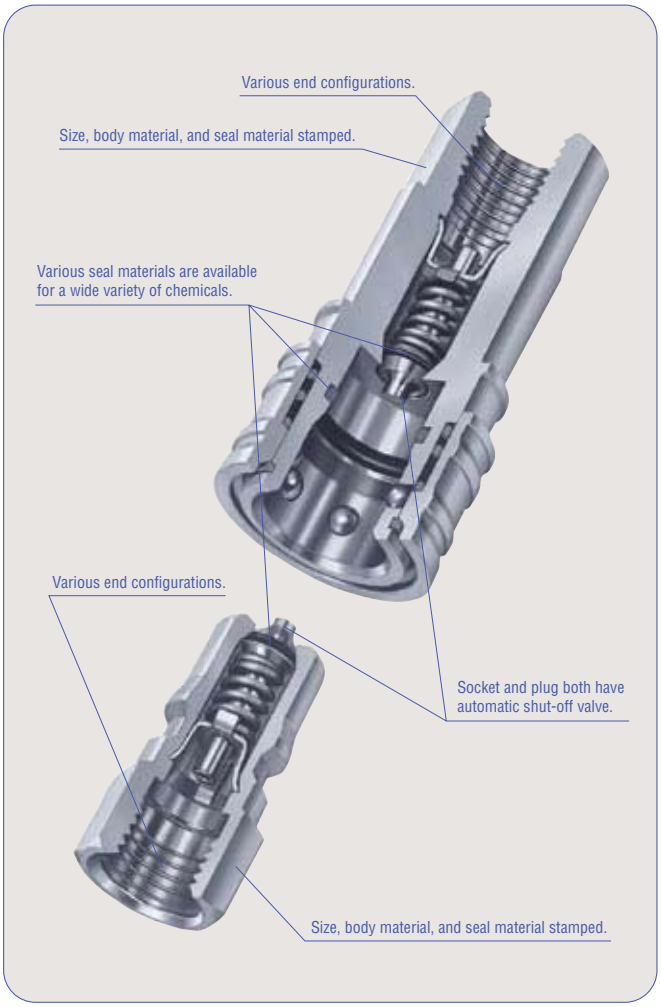
*1 : The symbol of SP is not stamped on the body.
*2 : The symbols of SCS, SCY, SCF, SCT, SCA, and SCE are stamped on the respective body.

SEMICON CUPLA Series

Standard series

SP Type

General purpose type with stainless steel body and rubber seal. Electropolished body for enhanced corrosion resistance.



Features

- Body and valve springs are stainless steel (SUS304, SUS316). Body is electropolished for enhanced corrosion reistance.
- Sealing material can be selected to suit your fluid and application, to flexibly comply with your semiconductor production process requirments.
- Abundant size variations allow choice to suit your application and flow rate.
- Each plug comes with a dust cap.

Specifications

Body material	Stainless steel (SUS304, SUS316) • SPE (electropolished)	
Size	1/8" • 1/4" • 3/8" • 1/2" • 3/4" • 1"	
Working pressure	0.2MPa {2kgf/cm²}	
Pressure resistance	0.3MPa {3kgf/cm²}	
Seal material	**Seal material**	**Mark**
	Fluoro rubber	FKM (X-100)
	Ethylene-propylene rubber	EPDM (EPT)
	Perfluoroelastomer	P
	Kalrez	KL
Working temperature range	0°C ~ +50°C	

Max. Tightening Torque N • m {Kgf-cm}

Size	**1/8-27NPT Rc 1/8"**	**1/4-18NPT Rc 1/4"**	**19/32-18UNS**	**Rc 3/8"**	**Rc 1/2"**	**Rc 3/4"**	**Rc 1"**
Torque	9 {92}	14 {143}	20 {204}	22 {224}	60 {612}	90 {918}	120 {1224}

Interchangeability

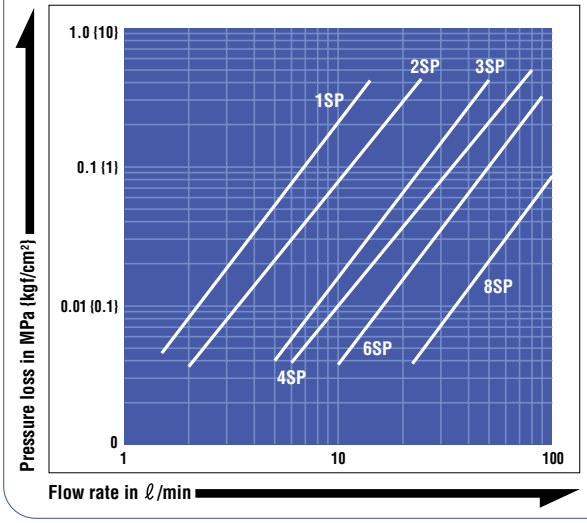
Same size can be connected regardless of end configurations.

Min. Cross-Sectional Area (mm²)

Model	**1SP**	**2SP**	**3SP**	**4SP**	**6SP**	**8SP**
Min. Cross-Sectional Area	13	17	48	64	83	192

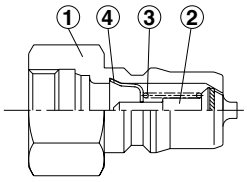
Flow Rate – Pressure Loss Characteristics

Test conditions • Fluid = water • Temperature = 20°C ± 5°C



Parts List

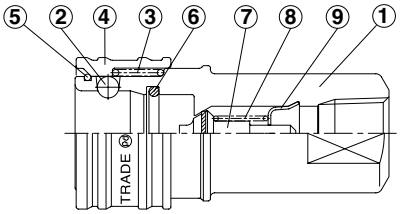
Plug



PN	Part name	Q'ty	Material	Remarks
①	Plug body	1	SUS304 or SUS316	Electropolished
②	Valve body assy	1	SUS304 or SUS316	Electropolished
③	Valve spring	1	SUS304 or SUS316	Electropolished
④	Valve support	1	SUS304 or SUS316	Electropolished

*1 : Seal material: Fluoro rubber (FKM), Ethylene-propylene rubber (EPDM), Perfluoroelastomer (P), or Kalrez (KL).
*2 : 6 pieces for 1S, 2S, and 3S. 8 pieces for 4S, 6S, and 8S.

Socket

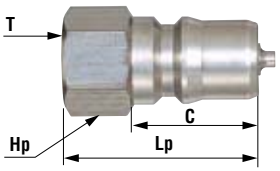


PN	Part name	Q'ty	Material	Remarks
①	Socket body	1	SUS304 or SUS316	Electropolished
②	Ball	*2	SUS304 or SUS316	
③	Sleeve spring	1	SUS304 or SUS316	Electropolished
④	Sleeve	1	SUS304 or SUS316	Electropolished
⑤	Stop ring	1	SUS304 or SUS316	Electropolished
⑥	O-ring	1	*1	
⑦	Valve body assy	1	SUS304 or SUS316	Electropolished
⑧	Valve spring	1	SUS304 or SUS316	Electropolished
⑨	Valve support	1	SUS304 or SUS316	Electropolished

Models and Dimensions

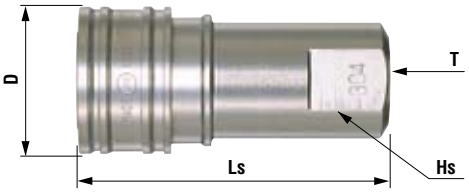
WAF : WAF stands for width across flat.

Plug



Model	Container capacity	Mass (g)	Dimensions (mm)			
			Lp	C	Hp (WAF)	T (Female thread)
1P-304	For 10ℓ ~ 20ℓ	19	29	19	*Hex.14	Rc 1/8
1P-304-NPT	For 10ℓ ~ 20ℓ					1/8-27NPT
1P-304-UNS	For 10ℓ ~ 20ℓ	34	33	19	Hex.21	19/32-18UNS
2P-304	For 10ℓ ~ 20ℓ	35	36	22	*Hex.17	Rc 1/4
2P-304-NPT	For 10ℓ ~ 20ℓ					1/4-18NPT
2P-304-UNS	For 10ℓ ~ 20ℓ	41	36	22	Hex.21	19/32-18UNS
3P-304	For 100ℓ ~ 200ℓ	60	40	25	*Hex.21	Rc 3/8
4P-304	For 100ℓ ~ 200ℓ	115	44	28	*Hex.29	Rc 1/2
6P-304	For 100ℓ ~ 200ℓ	216	52	36	*Hex.35	Rc 3/4
8P-304	For 100ℓ ~ 200ℓ	352	62	40	*Hex.41	Rc 1

Socket



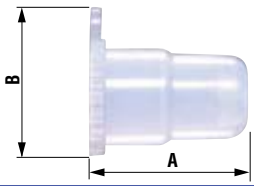
Model	Container capacity	Mass (g)	Dimensions (mm)			
			Ls	øD	Hs (WAF)	T (Female thread)
1S-304	For 10ℓ ~ 20ℓ	82	48	24	14	Rc 1/8
1S-304-NPT	For 10ℓ ~ 20ℓ	84				1/8-27NPT
2S-304	For 10ℓ ~ 20ℓ	138	58	28	19	Rc 1/4
2S-304-NPT	For 10ℓ ~ 20ℓ					1/4-18NPT
3S-304	For 100ℓ ~ 200ℓ	204	65	35	21	Rc 3/8
4S-304	For 100ℓ ~ 200ℓ	424	72	45	29	Rc 1/2
6S-304	For 100ℓ ~ 200ℓ	708	88	55	35	Rc 3/4
8S-304	For 100ℓ ~ 200ℓ	1081	102	65	41	Rc 1

* May have two spanner flats design instead of hex. nut depending on packing material. The appearances of SUS304 and 316 bodies are different (Above shown is that of SUS304).

Optional accessories

Dust cap for plug

Material : Polyethylene

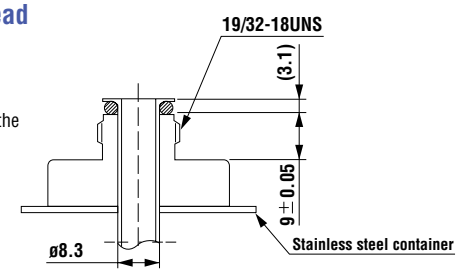


Model	Dimensions (mm)	
	A	B
Cap for 1P	24.5	23
Cap for 2P	27.3	26.8
Cap for 3P	31	30.8
Cap for 4P	34.5	37.5
Cap for 6P	44.7	46.3
Cap for 8P	52	53.4

The thread dimensions of container side for the plug with 19/32-18UNS thread

Reference diagram

*Please inquire of us for the detailed dimensions.



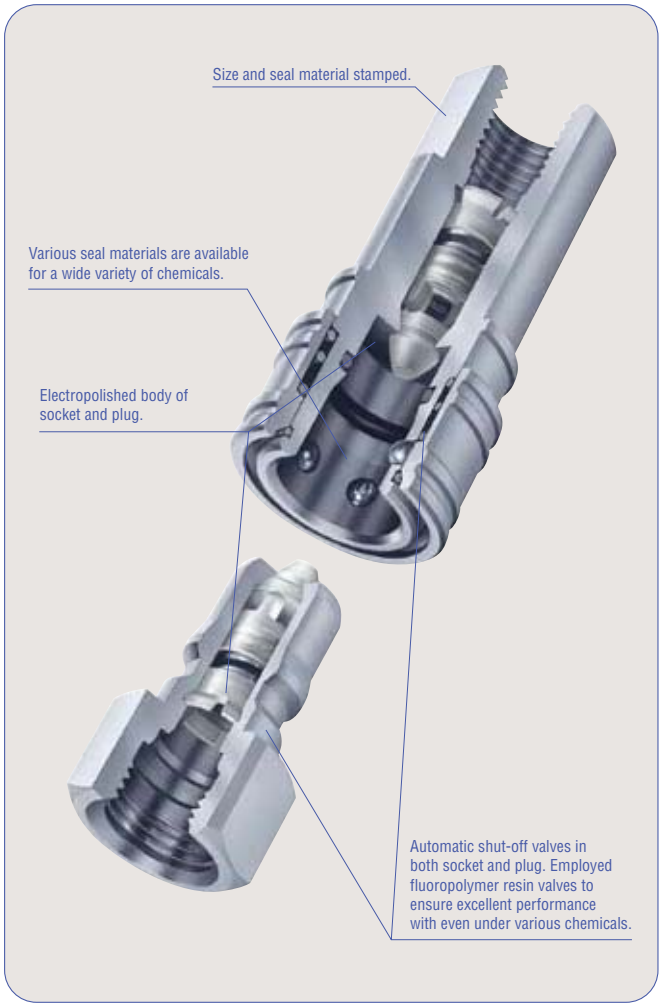
When ordering, please inquire of us for the delivery because some of the products may take a long production lead time.

SEMICON CUPLA Series

Standard series

SCS Type

Employed stainless steel body and fluoropolymer resin valves.



Features

- The body and spring material of stainless steel (SUS304), and valve of fluoropolymer resin ensure excellent performance with various chemicals.
- Body (SUS304) is electropolished for enhanced corrosion resistance.
- Plug comes with a dust cap.

Specifications

Body material		Electropolished stainless steel (SUS304)	
Size		1/8" • 1/4" • 3/8" • 1/2" • 3/4" • 1"	
Working pressure		0.2MPa {2kgf/cm²}	
Pressure resistance		0.3MPa {3kgf/cm²}	
Seal material		**Seal material**	**Mark**
	Socket O-ring	Perfluoroelastomer	P
		Ethylene-propylene rubber*	EPDM (EPT)
		Fluoro rubber*	FKM (X-100)
	Valve	Fluoropolymer resin (1/8" • 1/4") Fluoropolymer resin + SUS304 (3/8" • 1/2" • 3/4" • 1")	
Working temperature range		0°C ~ +50°C	

*Please inquire of us for seal materials other than perfluoroelastomer.

Max. Tightening Torque N • m {Kgf-cm}

Size	**1/8-27NPT Rc 1/8"**	**1/4-18NPT Rc 1/4"**	**19/32-18UNS**	**Rc 3/8"**	**Rc 1/2"**	**Rc 3/4"**	**Rc 1"**
Torque	9 {92}	14 {143}	20 {204}	22 {224}	60 {612}	90 {918}	120 {1224}

Interchangeability

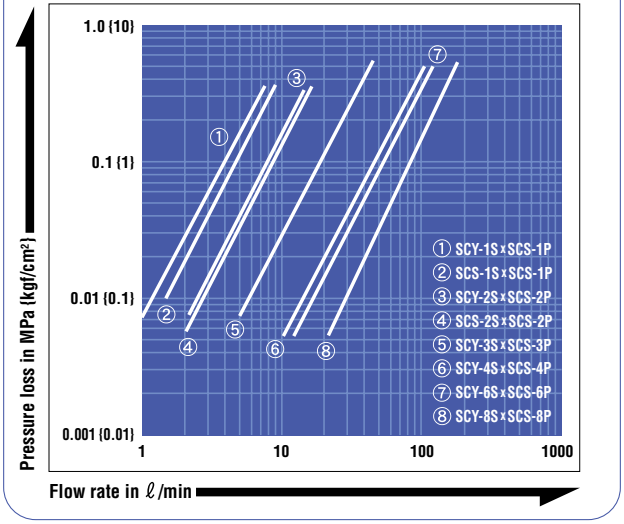
Different sizes are not connectable, but the same size of SCS type Cupla can be connected each other regardless of end configurations.
Plugs can be connected with sockets of SCY type of the same size.

Min. Cross-Sectional Area (mm²)

Model	**SCS-1SP**	**SCS-2SP**	**SCS-3P**	**SCS-4P**	**SCS-6P**	**SCS-8P**
Min. Cross-Sectional Area	15	23	28	71	110	162

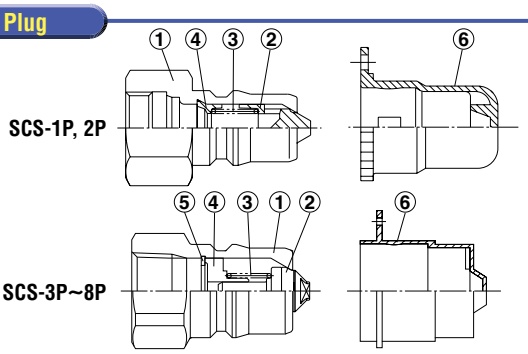
Flow Rate – Pressure Loss Characteristics

Test conditions • Fluid = water • Temperature = 21°C ~ 32°C



Parts List

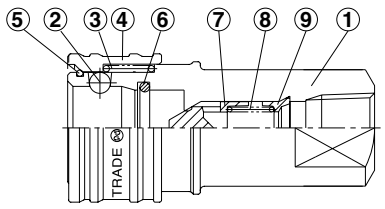
Plug



PN	Part name	Q'ty	Material	Remarks
①	Plug body	1	SUS304	Electropolished
②	Valve body Ass'y	1	PTFE , SUS304 *1	
③	Valve spring	1	SUS304	Electropolished
④	Valve Support	1	SUS316L *2	
⑤	Retaining ring	1	SUS304	Electropolished
⑥	Dust cap for plug	1	MDPE	

*1 : PFA for SCS-1P and SCS-2P.
*2 : PFA for SCS-1P and SCS-2P.

Socket (SCS-1S, SCS-2S)



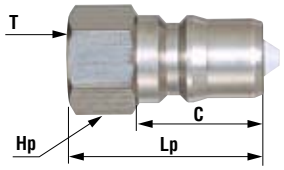
PN	Part name	Q'ty	Material	Remarks
①	Socket body	1	SUS304	Electropolished
②	Ball	6	SUS304	
③	Sleeve spring	1	SUS304	Electropolished
④	Sleeve	1	SUS304	Electropolished
⑤	Stop ring	1	SUS304	Electropolished
⑥	O-ring	1	*3	
⑦	Valve body	1	PFA	
⑧	Valve spring	1	SUS304	Electropolished
⑨	Valve support	1	PFA	

*3 : Any of seal materilas (namely, fluoro rubber, ethylene-propylene rubber, and perfluoroelastomer) can be used as a seal material.

Models and Dimensions

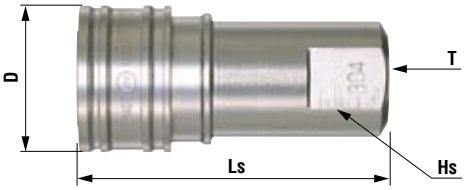
WAF : WAF stands for width across flat.

Plug



Model	Container capacity	Mass (g)	Dimensions (mm)			
			Lp	C	Hp (WAF)	T (Female thread)
SCS-1P	For 10ℓ ~ 20ℓ	17	29	19	Hex.14	Rc 1/8
SCS-1P-NPT	For 10ℓ ~ 20ℓ					1/8-27NPT
SCS-1P-UNS	For 10ℓ ~ 20ℓ	34	33	19	Hex.21	19/32-18UNS
SCS-2P	For 10ℓ ~ 20ℓ	32	34	22	Hex.17	Rc 1/4
SCS-2P-NPT	For 10ℓ ~ 20ℓ	29				1/4-18NPT
SCS-2P-UNS	For 10ℓ ~ 20ℓ	41	36	22	Hex.21	19/32-18UNS
SCS-3P	For 100ℓ ~ 200ℓ	61	40	25	Hex.21	Rc 3/8
SCS-4P	For 100ℓ ~ 200ℓ	114	44	28	Hex.29	Rc 1/2
SCS-6P	For 100ℓ ~ 200ℓ	198	52	36	Hex.35	Rc 3/4
SCS-8P	For 100ℓ ~ 200ℓ	338	62	40	Hex.41	Rc 1

Socket



Model	Container capacity	Mass (g)	Dimensions (mm)			
			Ls	øD	Hs (WAF)	T (Female thread)
SCS-1S-NPT	For 10ℓ ~ 20ℓ	84	48	24	14	1/8-27NPT
SCS-2S-NPT	For 10ℓ ~ 20ℓ	138	58	28	19	1/4-18NPT

Connectable sockets with SCS Type plugs

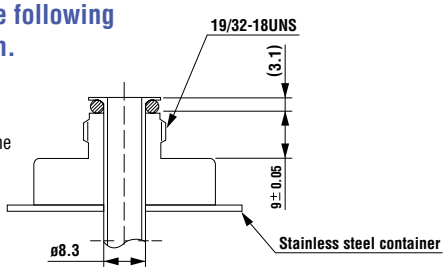
● … indicates connection capability except for made-to-order products.

Plug		Socket Model	SCS Type -1S	SCS Type -2S	SCY Type -1S	SCY Type -2S	SCY Type -3S	SCY Type -4S	SCY Type -6S	SCY Type -8S
SCS Type	-1P		●		●					
	-2P			●		●				
	-3P						●			
	-4P							●		
	-6P								●	
	-8P									●

The container for plug with 19/32-18UNS must be threaded as indicated in the following reference diagram.

Reference diagram

*Please inquire of us for the detailed dimensions.



When ordering, please inquire of us for the delivery because some of the products may take a long production lead time.

SEMICON CUPLA Series

SCY Type

Standard series

Fluoropolymer resin packing seal and perfluoroelastomer packing seal are used to reduce required connection load and to achieve tight sealing.

Features

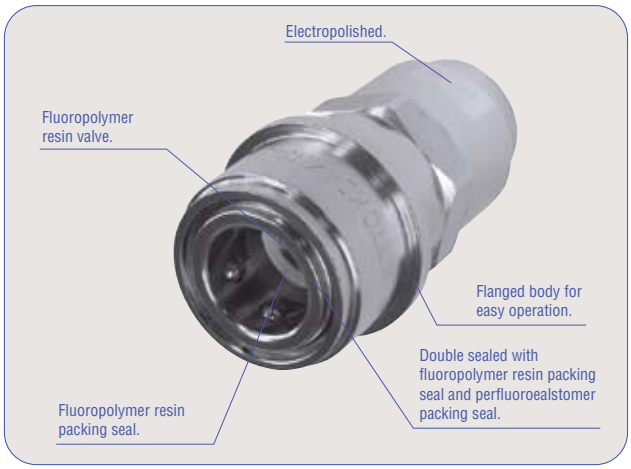
- The material of body and spring are of stainless steel (SUS304), while that of valve is of fluorine contained resin. The combination shows excellent peformance with various types of chemicals.
- Body (SUS304) is electropolished for enhanced corrosion resistance.
- Flanged body makes it easy to operate even with gloves.

Specifications

Body material		Electropolished stainless steel (SUS304)
Size		1/8" • 1/4" • 3/8" • 1/2" • 3/4" • 1"
Working pressure		0.2MPa {2kgf/cm²}
Pressure resistance		0.3MPa {3kgf/cm²}
Seal material	**Socket packing seal**	Perfluoroelastomer (Mark : P)
	Valve	Fluoropolymer resin
Working temperature range		0°C ~ +50°C

*If you need other seal material than Perfluoroelastomer, please consult with us.

■ Regarding the flow rate - pressure loss characteristics of SCY type, please refer to the flow rate - pressure loss characteristics of SCS type on page 7.



Max. Tightening Torque N • m {Kgf-cm}

Size	1/8-27NPT Rc1/8"	1/4-18NPT Rc1/4"	Rc 3/8"	Rc 1/2"	Rc 3/4"	Rc 1"
Torque	9 {92}	14 {143}	22 {224}	60 {612}	90 {918}	120 {1224}

Interchangeability

Can be connected with plugs of SCS type of the same size.
See the interchangeability check list on page 8.

Min. Cross-Sectional Area (mm²)

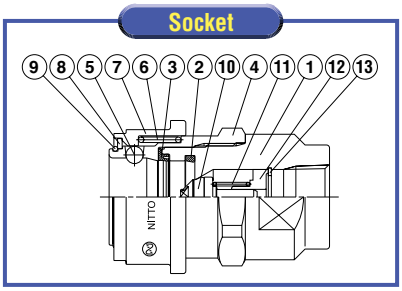
Model	SCY-1S	SCY-2S	SCY-3S	SCY-4S	SCY-6S	SCY-8S
Min. Cross-Sectional Area	15	23	28	71	110	162

Note:

If dusts are attached to the plug, seal materials inside the socket will be damaged when coupled. Always keep the plug clean.

Parts list

Socket



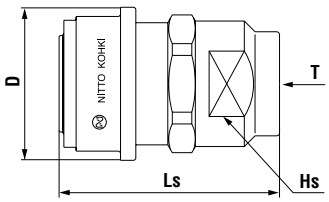
*1 : The all-in-one valve ass'y for SCY-1S and SCY-2S is made of PFA.
*2 : SCY-1S and SCY-2S are not electropolished.
*3 : The valve support for SCY-1S and SCY-2A is made of PFA, but that for SCY-8S is made of SCS14.
*4 : SCY-1S, 2S have no retaining ring. In SCY-3S not a retaining ring but a stopper is used.
*5 : The ball quanatity in SCY-1S, 2S, and 3S is 6 pcs. , and 8 pcs. in SCY-4S, 6S, and 8S.
*6 : For SCY-4S only.

PN	Part name	Q'ty	Material	Remarks
①	Socket body	1	SUS304	Electropolished
②	Seal material	1	Perfluoroelastomer	
③	Fluorine contained resin packing seal	1	PTFE	
④	Ball holder	1	SUS304	Electropolished
⑤	Ball	*5	SUS304	
⑥	Sleeve spring	1	SUS304	Electropolished
⑦	Sleeve	1	SUS304	Electropolished
⑧	Collar *6	1	SUS304	Electropolished
⑨	Stop ring	1	SUS304	Electropolished
⑩	Valve ass'y *1	1	SUS304, PTFE *1	Electropolished *2
⑪	Valve spring	1	SUS304	Electropolished
⑫	Valve support	1	SUS316L *3	Electropolished *2
⑬	Retaining ring *4	1	SUS304	Electropolished

Models and Dimensions

WAF : WAF stands for width across flat.

Socket



Model	Container capacity	Mass (g)	Dimensions (mm)			
			Ls	øD	Hs (WAF)	T (Female thread)
SCY-1S	For 10ℓ ~ 20ℓ	116	(48)	29	18	Rc 1/8
SCY-1S-NPT	For 10ℓ ~ 20ℓ					1/8-27NPT
SCY-2S	For 10ℓ ~ 20ℓ	180	(58)	33	22	Rc 1/4
SCY-2S-NPT	For 10ℓ ~ 20ℓ					1/4-18NPT
SCY-3S	For 100ℓ ~ 200ℓ	292	(65)	39	27	Rc 3/8
SCY-4S	For 100ℓ ~ 200ℓ	519	(72)	50	35	Rc 1/2
SCY-6S	For 100ℓ ~ 200ℓ	862	(88)	59	41	Rc 3/4
SCY-8S	For 100ℓ ~ 200ℓ	1360	(102)	68	50	Rc 1

SEMICON CUPLA Series

Semi-standard series

SP-GN Type

The SP-GN type is another version of SP type series, but no interchangeability with SP type.

Features

- Even if inserted into SP type, the valve of SP-GN type will not open.
- Body and valve springs are stainless steel (SUS304).
  Body is electropolished for enhanced corrosion resistance.
- Seal material can be selected to suit your fluid and application, to flexibly comply with your semiconductor production process requirements.
- Abundant size variations allow choice to suit your application and flow rate.
- To distinguish itself from the SP type, it has a single groove in the plug hexagon and the wrench face of the socket.

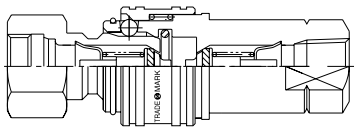
Plug	Socket
	

Specifications

Body material	Stainless steel (SUS304) • SPE (Electropolished)			
Size	1/8" • 1/4" • 3/8" • 1/2" • 3/4"			
Working pressure	0.2MPa {2kgf/cm²}			
Pressure resistance	0.3MPa {3kgf/cm²}			
Seal material	**Seal material**	**Mark**	**Seal material**	**Mark**
	Fluoro rubber	FKM (X-100)	Perfluoroelastomer	P
	Ethylene-propylene rubber	EPDM (EPT)	Kalrez	KL
Working temperature range	0°C ~ +50°C			
End configurations	Rc thread • NPT thread • 19/32-18UNS female thread			

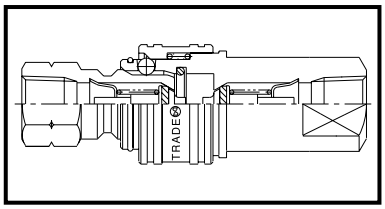
Interchangeability

When SP type plug is inserted into SP-GN type socket



The inner diameter of the SP-GN socket is smaller than the outer diameter of SP type plug. Therefore they cannot be connected.

When SP-GN type plug is inserted into SP type socket



In this case inner diameter of SP type socket is smaller than the outer dimater of SP-GN type plug. Therefore they cannot be connected.

When ordering, please inquire of us for the delivery because some of the products may take a long production lead time.

SEMICON CUPLA Series

Semi-standard series

SML Type

Sockets with L-shaped male thread end configuration are interchangeable with plugs for SP type.

Features

- Sockets are interchageable with plugs of SP type. L-shaped male thread end configuration enhances operability and minimizes piping space.
- Body and valve springs are made of stainless steel (SUS304).
  Body is electropolished or pickled and passivated for enhanced corrosion resistance.
- Seal materials can be selected to suit your fluid and application, to flexibly comply with your semiconductor production process requirements.
- To distinguish the IN side from the OUT side, it has a single groove in the sleeve flange of the IN side socket.

Interchangeability

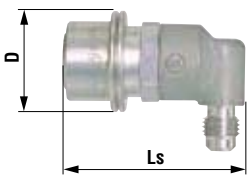
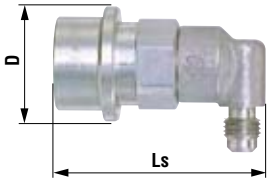
- It is compatible with an SP type plug (see page 6).
- Same size can be connected together irrespective of the type of thread. Different sizes cannot be connected together.

Specifications

Body material	Stainless steel (SUS304) • Electropolished or pickled-and-passivated			
Size	1/8" • 1/4"			
Working pressure	0.2MPa {2kgf/cm²}			
Pressure resistance	0.3MPa {3kgf/cm²}			
Seal material	**Seal material**	**Mark**	**Seal material**	**Mark**
	Fluoro rubber	FKM (X-100)	Perfluoroelastomer	P
	Ethylene-propylene rubber	EPDM (EPT)	Kalrez	KL
Working temperature range	0°C ~ +50°C			
End configurations	7/16-20UNF, 1/8-27NPT, 1/4-18NPT			

Models and Dimensions

Socket

IN side	OUT side
	

	Model	Container capacity	Mass (g)	Dimensions (mm)	
				Ls	øD
IN side	1SML	For 10ℓ ~ 20ℓ	119	52	29
OUT side	2SML	For 10ℓ ~ 20ℓ	158	59.5	32

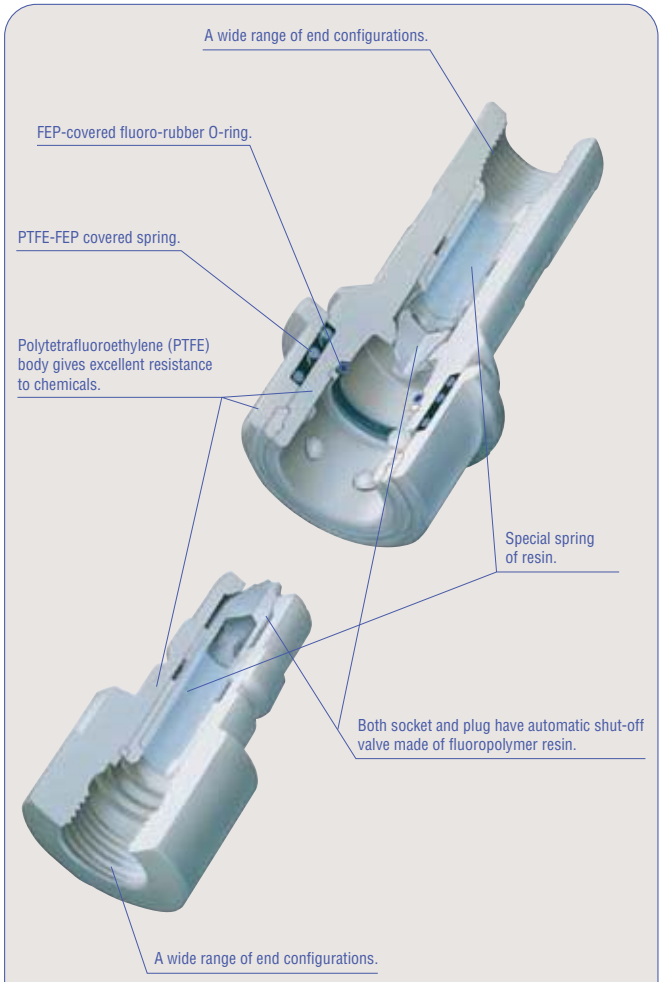
When ordering, please inquire of us for the delivery because some of the products may take a long production lead time.

SEMICON CUPLA Series

Standard series

SCT Type

Employed is polytetrafluoroethylene (PTFE) for the body.



Note:
The export trade control ordinance of Japanese Ministry of Economy, Trade and Industry regulates that export of SCT-4SP or bigger size SCT models must be approved by the ministry before exportation. In order to receive approval for export we are requested to give detailed information of user to the ministry.

Features

- Polytetrafluoroethylene (PTFE) body gives excellent resistance to chemicals.
- Automatic shut-off valves in both socket and plug prevent fluid outflow from lines on disconnection.
- No dissolution of metal ions from part in contact with liquid ensures excellent reliability.
- All components are cleaned, assembled, inspected and then packed in a clean room.
- Appropriate model can be selected from abundant variety of sizes to suit your application and flow rate.

Specifications

Body material		Polytetrafluoroethylene (PTFE)
Size		1/4" • 3/8" • 1/2" • 3/4" • 1"
Working pressure		0.2MPa {2kgf/cm²}
Pressure resistance		0.3MPa {3kgf/cm²}
Seal material	**Socket O-ring**	FEP-covered fluoro-rubber
	Valve	Fluoropolymer resin
Working temperature range		+5˚C ~ +50˚C

Max. Tightening Torque As a Guide

After wrapping tape sealant on male threads and tightening the Cupla firmly with your hand, tighten the Cupla with wrench as follows:

1 3/4 to 2 turns	1/4" • 3/8" • 1/2" • 3/4" • 1" Size

Overtightening may damage the thread, resulting in leakage.

Interchangeability

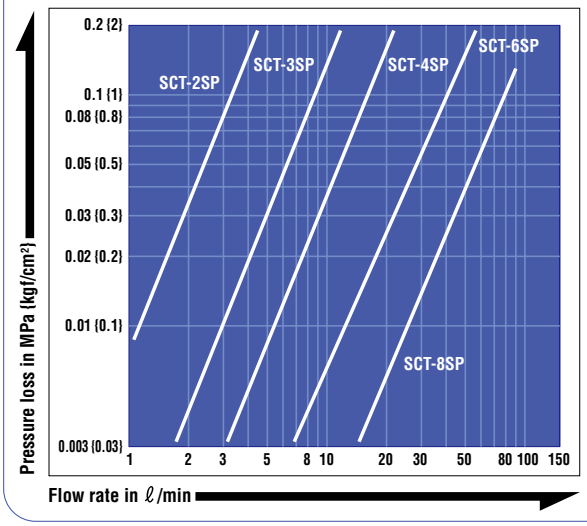
Different size socket and plug cannot be connected each other.

Min. Cross-Sectional Area (mm²)

Model	**SCT-2SP**	**SCT-3SP**	**SCT-4SP**	**SCT-6SP**	**SCT-8SP**
Min. Cross-Sectional Area	12	34	54	103	225

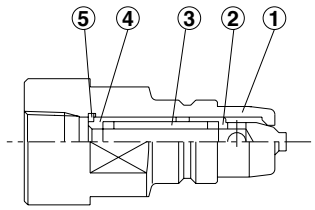
Flow Rate – Pressure Loss Characteristics

Test conditions • Fluid = water • Temperature = 20˚C ± 5˚C



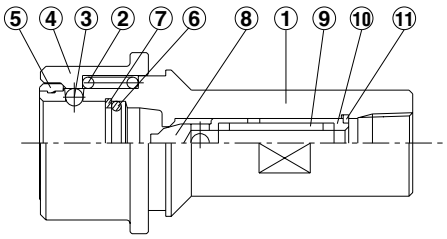
Parts List

Plug



PN	Part Name	Q'ty	Material	Remarks
①	Plug body	1	PTFE	
②	Valve	1	PFA	
③	Valve spring	1	PTFE	
④	Spring holder	1	PTFE	
⑤	Ring	1	PTFE	

Socket



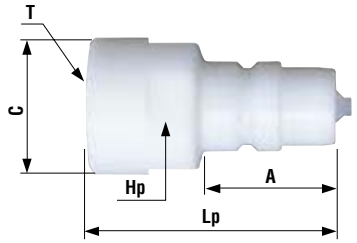
PN	Part Name	Q'ty	Material	Remarks
①	Socket body	1	PTFE	
②	Sleeve spring	1	SUS304	PTFE-FEP covered
③	Ball	*1	PTFE	
④	Sleeve	1	PTFE	
⑤	Stopper	1	PTFE	
⑥	O-ring	1	FKM	FEP-covered
⑦	Backup ring	1	PTFE	
⑧	Valve	1	PFA	
⑨	Valve spring	1	PTFE	
⑩	Spring holder	1	PTFE	
⑪	Ring	1	PTFE	

*1 : The 2S, 3S, 4S, and 6S have six balls. The 8S has ten balls.

Models and Dimensions

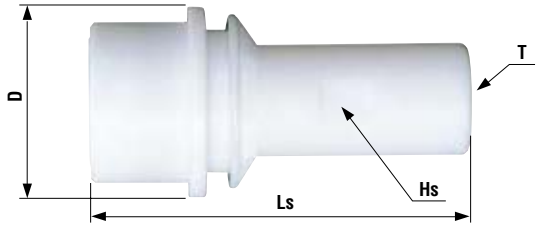
WAF : WAF stands for width across flat.

Plug



Model	Mass (g)	Dimensions (mm)				
		Lp	A	øC	Hp (WAF)	T (Female thread)
SCT-2P	43	59	30.5	27.5	24	Rc 1/4
SCT-2P-NPT						1/4-18NPT
SCT-3P	77	68.5	33.5	34.5	30	Rc 3/8
SCT-3P-NPT						3/8-18NPT
SCT-4P	91	69.5	37.5	39.5	36	Rc 1/2
SCT-4P-NPT						1/2-14NPT
SCT-6P	160	78.5	45	48	41	Rc 3/4
SCT-6P-NPT						3/4-14NPT
SCT-8P	300	112	60.5	59	50	Rc 1
SCT-8P-NPT						1-11.5NPT

Socket

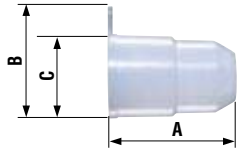


Model	Mass (g)	Dimensions (mm)			
		Ls	øD	Hs (WAF)	T (Female thread)
SCT-2S	101	89.5	41	19	Rc 1/4
SCT-2S-NPT					1/4-18NPT
SCT-3S	156	102	49.5	24	Rc 3/8
SCT-3S-NPT					3/8-18NPT
SCT-4S	192	107	54.5	30	Rc 1/2
SCT-4S-NPT					1/2-14NPT
SCT-6S	340	123	68	36	Rc 3/4
SCT-6S-NPT					3/4-14NPT
SCT-8S	770	172.5	82	46	Rc 1
SCT-8S-NPT					1-11.5NPT

* Rc threads and NPT threads are available as end connections.
* Both plug body and socket body with Rc threads have V groove on the body. NPT threads type has no groove on the body.
* Please check with us on flange and other end connections.

Optional accessories

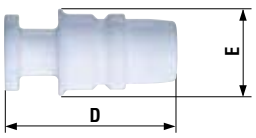
Dust Cap for Plug



Model	Dimensions (mm)		
	A	B	øC
For SCT-2P	37.0	–	24
For SCT-3P	39.0	34.5	26
For SCT-4P	43.5	38.5	29
For SCT-6P	52.0	48.6	37.2
For SCT-8P	71.5	–	53

*The caps for SCT-2P and SCT-8P are made by cutting work.
Because of this the shapes of them differ from those of other models.

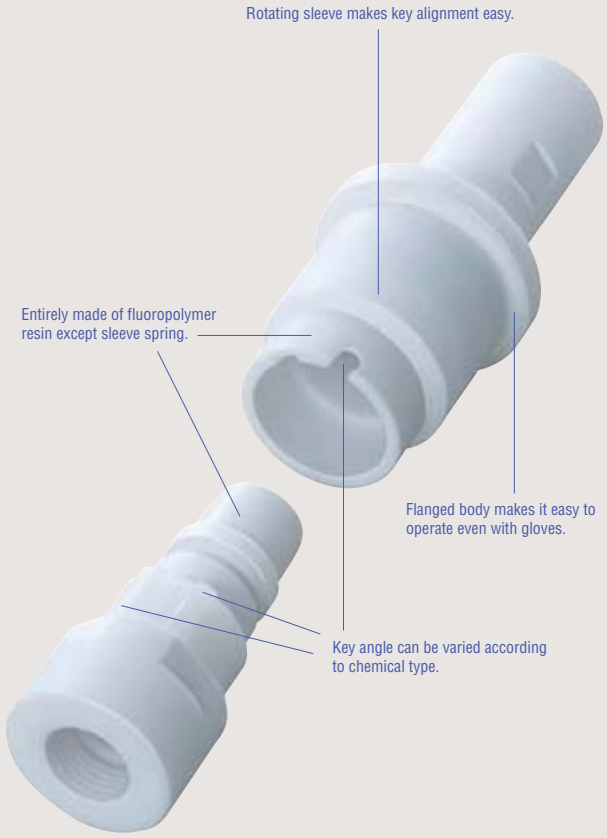
Dust Cap for Socket



Model	Dimensions (mm)	
	D	øE
For SCT-2S	50	19.5
For SCT-3S	53	24.5
For SCT-4S	58	29.5
For SCT-6S	67	39.5
For SCT-8S	72.5	48.0

SCT-K Type

Employed is polytetrafluoroethlene (PTFE) for the body.



Note:
The export trade control ordinance of Japanese Ministry of Economy, Trade and Industry regulates that export of SCT-K type socket and plug with 1/2" threads or bigger size threads must be approved by the ministry before exportation. In order to receive approval for export we are requested to give detailed information of user to the ministry.

Features

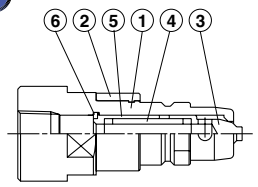
- Key angle can be varied according to chemical type in order to prevent wrong connection.
- Rotating keyed sleeve makes the key alignment easy and absorbs tube twisting.
- All components except sleeve spring are made of fluoropolymer resin to resist chemicals and to prevent dissolution of metal ions from parts.

Specifications

Body material		Polytetrafluoroethylene (PTFE)
Size		1/4" • 3/8" • 1/2" • 3/4" • 1"
Working pressure		0.2MPa {2kgf/cm²}
Pressure resistance		0.3MPa {3kgf/cm²}
Seal material	**Socket O-ring**	FEP-covered fluoro-rubber
	Valve	Fluoropolymer resin
Working temperature range		+5˚C ~ +50˚C

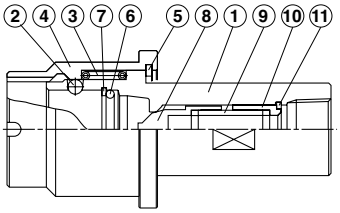
Parts list

Plug



PN	Part name	Q'ty	Material
①	Plug body	1	PTFE
②	Key ring P	1	PTFE
③	Valve body	1	PFA
④	Valve spring	1	PTFE
⑤	Spring holder	1	PTFE
⑥	Ring	1	PTFE

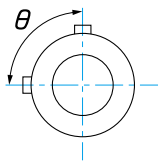
Socket



PN	Part name	Q'ty	Material
①	Socket body	1	PTFE
②	Ball	*3	PTFE
③	Sleeve spring	1	SUS304 *1
④	Sleeve K	1	PTFE
⑤	Stopper	1	PTFE
⑥	O-ring	1	FKM *2
⑦	Backup ring	1	PTFE
⑧	Valve body	1	PFA
⑨	Valve spring	1	PTFE
⑩	Spring holder	1	PTFE
⑪	Ring	1	PTFE

*1 : PTFE-FEP-covered SUS304.
*2 : FEP-covered fluoro-rubber.
*3 : 6 pcs. for 2S, 3S, 4S, 6S and 10pcs. for 8S.

Combination example of key angle and chemical



Key angle	*Chemical
45˚	Nitric acid
60˚	Sulfuric acid
75˚	Ammonia
90˚	Acetic acid
105˚	Hydrochloric acid
120˚	Hydrofluoric acid
Ten models up to 180˚ at increments of 15˚	

* Name of chemicals is for reference only.

SEMICON CUPLA Series

Special series

SCA Type

Push-to-connect design. Employed is polytetrafluoroethylene (PTFE) for the body. Spillage is minimized when disconnected.

Features

- Just push in the plug to socket for simple and secure connection.
- Automatic shut-off valves in both socket and plug minimize fluid spill out on disconnection.
- Polytetrafluoroethylene body gives excellent resistance to chemicals.
- No dissolution of metal ions from the flow path ensures excellent reliability.
- All components are cleaned, assembled, inspected, and packed in a clean room.

Specifications

Body material		Polytetrafluoroethylene (PTFE)
Size		1/2"
Working pressure		0.2MPa {2kgf/cm²}
Pressure resistance		0.3MPa {3kgf/cm²}
Seal material	**Socket**	Perfluoroelastomer • Fluoropolymer resin
	Plug	Fluoropolymer resin
Working temperature range		+10˚C ~ +50˚C

When ordering, please inquire of us for the delivery because some of the products may take a long production lead time.

SEMICON CUPLA Series

Special series

SCE Type

Designed for 200-liter polyethylene container. Plug is made of polyethylene for corrosion resistance.

Features

- Designed for 200-liter polyethylene container.
  Special structure protects the plug from damaging in delivery of container.
- Plug made of polyethylene has corrosion resistance.
- Just push in the plug to socket for simple and secure connection.
- Automatic shut-off valves in both socket and plug minimize fluid spill out on disconnection.
- Varied key angles according to chemical type eliminate risk of chemical mix up.
- Sleeve can be turned for position adjustment and absorption of tube twisting.
- All components are cleaned, assembled, inspected and then packed in a clean room.

Specifications

Body material	**Socket**	Polytetrafluoroethylene (PTFE)
	Plug	High-density polyethylene (HDPE)
Size		3/4"
Working pressure		0.2MPa {2kgf/cm²}
Pressure resistance		0.3MPa {3kgf/cm²}
Seal material	**Socket**	Perfluoroelastomer • Fluoropolymer resin
	Plug	Fluoropolymer resin, Fluoro-rubber or Ethylene-propylene rubber
Working temperature range		+10˚C ~ +50˚C

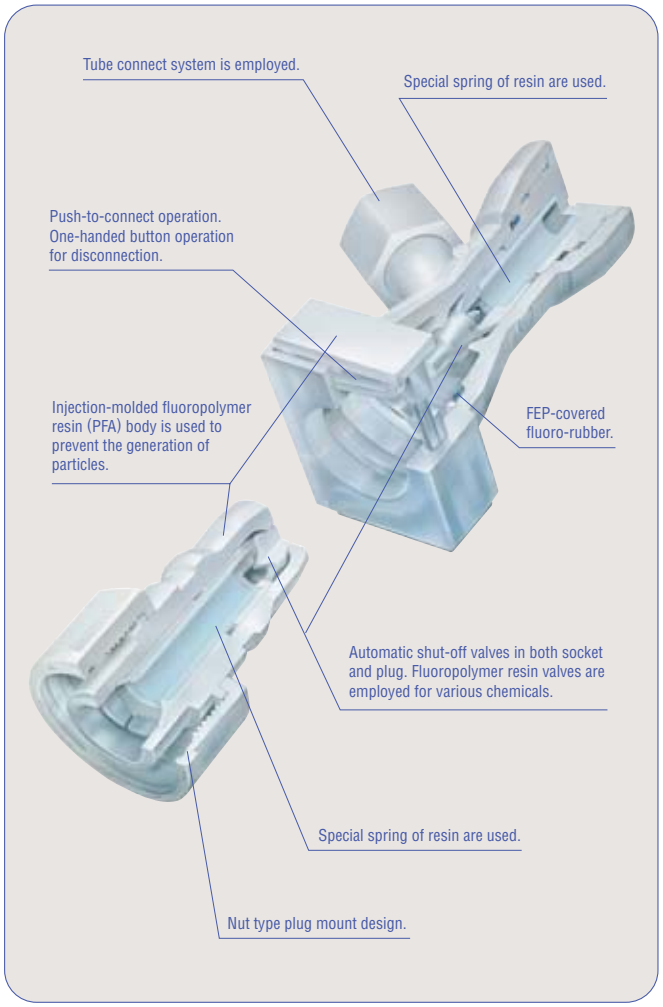
When ordering, please inquire of us for the delivery because some of the products may take a long production lead time.

SEMICON CUPLA Series

Standard series

SCF Type

All plastic model. Fluoropolymer resin (PFA) body is injection molded.



Features

- All parts made of fluoropolymer resin. O-rings in particular are FEP-covered fluoro-rubber with excellent chemical resistance and no rubber elution.
- Unique new techniques such as “injection molding”, “tube connection system” and “nut type plug mount design” are used to prevent the generation of particles, incessant headache for semiconductor parts manufacturers.
- To connect with a plug, just push the socket on to it. Disconnection is done in simple and one-handed button operation.
- Unique “double-lock” mechanism” prevents accidental disconnection of socket and plug.
- Branched tube port improves operability and reduces required piping space.
- Plugs come with a dust cap.

Specifications

Body material		Fluoropolymer resin (PFA)
Size		1/4" • 3/8"
Working pressure		0.2MPa {2kgf/cm²}
Pressure resistance		0.3MPa {3kgf/cm²}
Seal material	**Socket O-ring**	FEP-covered fluoro-rubber
	Valve	Fluoropolymer resin
Working temperature range		+5˚C ~ +50˚C

Interchangeability

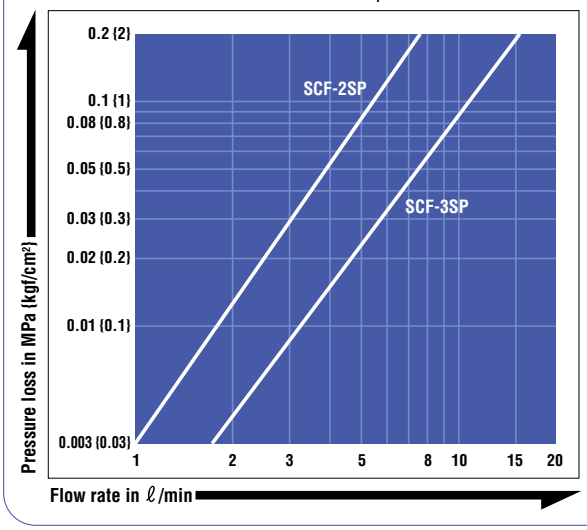
SCF-2 type for the IN side and SCF-3 type for the OUT side cannot be connected together.

Min. Cross-Sectional Area (mm²)

Model	SCF-2SP	SCF-3SP
Min. Cross-Sectional Area	23.8	44.2

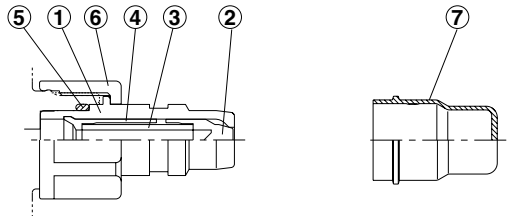
Flow Rate – Pressure Loss Characteristics

Test conditions • Fluid = water • Temperature = 20˚C ± 5˚C



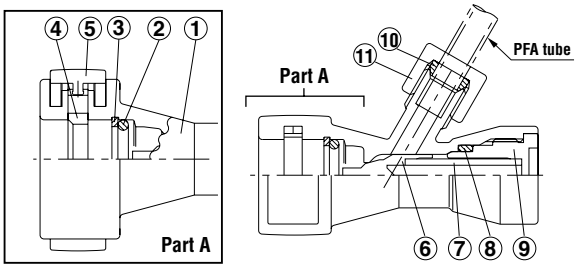
Parts List

Plug



PN	Part name	Q'ty	Material	Remarks
①	Plug body	1	PFA	
②	Valve P	1	PFA	
③	Valve spring	1	PTFE	
④	Spring holder	1	PFA	
⑤	O-ring	1	FKM	FEP-covered
⑥	Nut	1	ETFE	
⑦	Plug cap	1	HDPE	

Socket

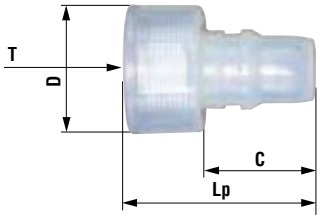


PN	Part name	Q'ty	Material	Remarks
①	Socket body	1	PFA	
②	O-ring	1	FKM	FEP-covered
③	Backup ring	1	PTFE	
④	Lock plate	2	ETFE	
⑤	Push button	2	ETFE	
⑥	Valve S	1	PFA	
⑦	Valve spring	1	PTFE	
⑧	O-ring	1	FKM	FEP-covered
⑨	End cap	1	PFA	
⑩	Ferrule	1	PTFE	
⑪	Ferrule nut	1	PFA	

Models and Dimensions

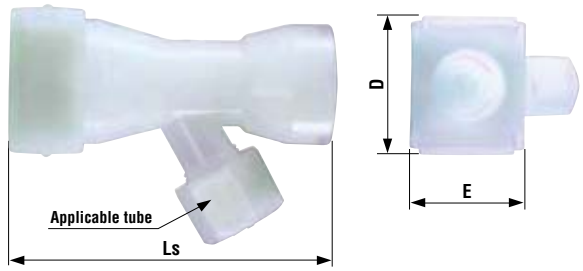
WAF : WAF stands for width across flat.

Plug



Model	Container capacity	Mass (g)	Dimensions (mm)			
			Lp	D (WAF)	C	T (Female thread)
SCF-2P-M26	For 10ℓ ~ 20ℓ	33	(53.7)	Hex.30 x ø32.5	(31.2)	M26 x 1.5
SCF-3P-M32	For 10ℓ ~ 20ℓ	50	(57.7)	Hex.36 x ø39	(35.2)	M32 x 1.5

Socket



Model	Container capacity	Mass (g)	Dimensions (mm)			
			Ls	D	E	Applicable tube
SCF-2SL-N08	For 10ℓ ~ 20ℓ	76	77	(45)	33	ø6 x ø8
SCF-3SL-N10	For 10ℓ ~ 20ℓ	116	85	(51)	39	ø8 x ø10

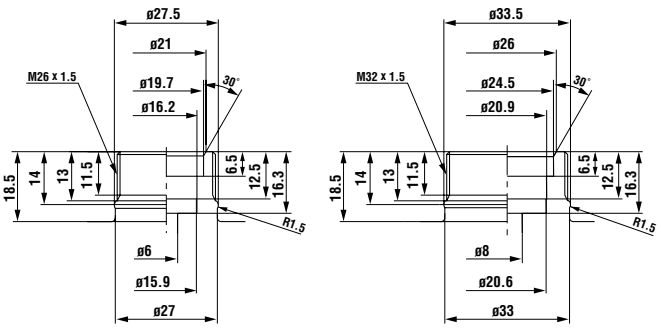
Optional accessories

Dust Cap for Socket

Model	Dimensions (mm)	
	A	øB
Cap for SCF-2S	60	29.5
Cap for SCF-3S	64	34.5

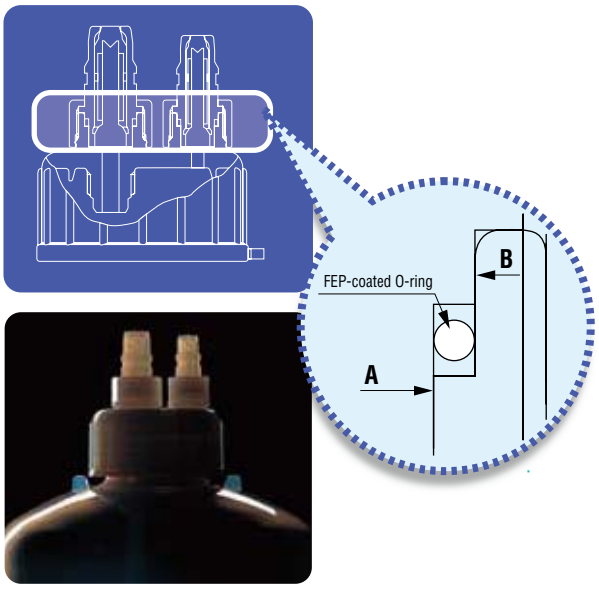
Reference diagram

The thread dimensions of container side for the plug.



For tolerrance and other specific dimensions, consult us.

Features of the nut-type plug mounting mechanism of the SCF type



The use of a nut system in installing the plug on the container achieves the following advantages:

- **Easy plug installation.**
- **Reduced particle generation.**
- **O-rings are FEP-covered fluoro-rubber with excellent chemical resistance and no rubber elution.**
- **The shaft sealing structure (part A & B) prevents leaks even when the nut is loosened slightly.**

Plug-retaining plate for the SCF type (optional)

Plug-retaining plate

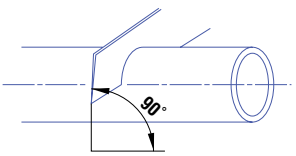
Plug-retaining plate mounted

The use of a retaining plate keeps the plug nut tight. The plug nut can be used reliably and for a long time without retightening.

How to attach a tube to the socket

① Cut the tube

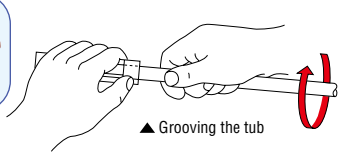
Cut the tube (PFA) at right to the tube angles with a cutter blade or a knife.



② Groove the tube

Insert the tube to the hilt into the special jig (see the below figure.) and keep the jig's cutter blade pressed down while you rotate the tube about 1 1/2 turns. It will give you complete groove on the tube good for ferrule mount. Special jigs to suit different tube sizes are available in the market as indicated below.

▲ Special jig



▲ Grooving the tub

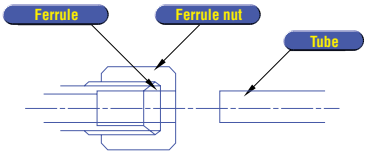
● **Special jig**

Socket type	Tube size	Jig Model No.
SCF-2SL-N08	ø8 x ø6	T-8
SCF-3SL-N10	ø10 x ø8	T-10

***You may buy the jigs through Nitto Kohki.**

③ Inserting the tube

Insert the grooved tube firmly into the Cupla. In this procedure, be careful not to take out the ferrule nut.



▲ Note ferrule position (taper facing towards Cupla)

④ Tightening the nut

After lightly tightening the ferrule nut with your fingers, further turn it another 1 1/2 turns with a spanner tool. Be careful not to over-tighten.

SEMICON CUPLA Series

Standard series

SCF Straight Type

The SCF straight type is another version of SCF series. Straightened body works as an intermdediate joint.

Features

- All parts made of fluoropolymer resin. O-rings in particular are FEP-covered fluoro-rubber with excellent chemical resitance and no rubber elution.
- Unique new technique of “injection molding” is used to prevent the generation of particles, incessant headache for semiconductor parts manufacturers.
- To connect with a plug, just push the socket on to it. Disconnection is done in simple and one-handed button operation.
- Unique “double-lock mechanism” prevents accidental disconnection of socket and plug.

Specifications

Body material		Fluoropolymer resin (PFA)
Size		1/4" • 3/8"
Working pressure		0.2MPa {2kgf/cm²}
Pressure resistance		0.3MPa {3kgf/cm²}
Seal material	**Socket O-ring**	FEP-covered fluoro-rubber
	Valve	Fluoropolymer resin
Working temperature range		+5˚C ~ +50˚C

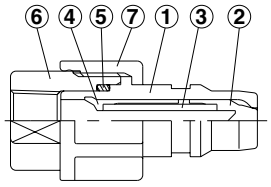
Interchangeability

- Can be connected with SCF type (See page 16).
- Same size can be connected together regardless of the end configulations.

When ordering, please inquire of us for the delivery because some of the products may take a long production lead time.

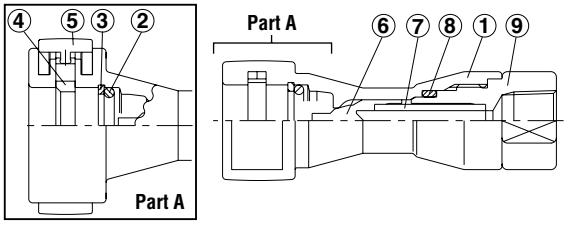
Parts List

Plug



PN	Part name	Q'ty	Material	Remarks
①	Plug body	1	PFA	
②	Valve body P	1	PFA	
③	Valve spring	1	PTFE	
④	Spring holder	1	PFA	
⑤	O-ring	1	FKM	FEP-covered
⑥	Adapter	1	PTFE	
⑦	Nut	1	ETFE	

Socket

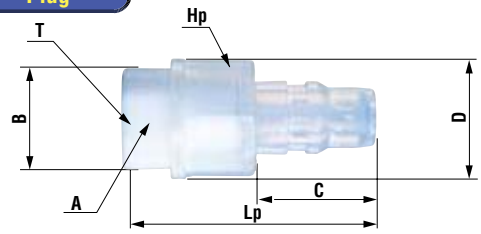


PN	Part name	Q'ty	Material	Remarks
①	Socket body	1	PFA	
②	O-ring	1	FKM	FEP-covered
③	Backup ring	1	PTFE	
④	Lock plate	2	ETFE	
⑤	Push button	2	ETFE	
⑥	Valve body S	1	PFA	
⑦	Valve spring	1	PTFE	
⑧	O-ring	1	FKM	FEP-covered
⑨	Adapter	1	PTFE	

Models and Dimensions

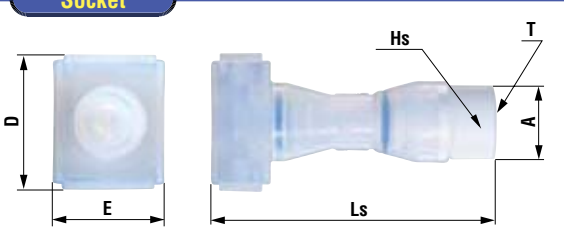
WAF : WAF stands for width across flat.

Plug



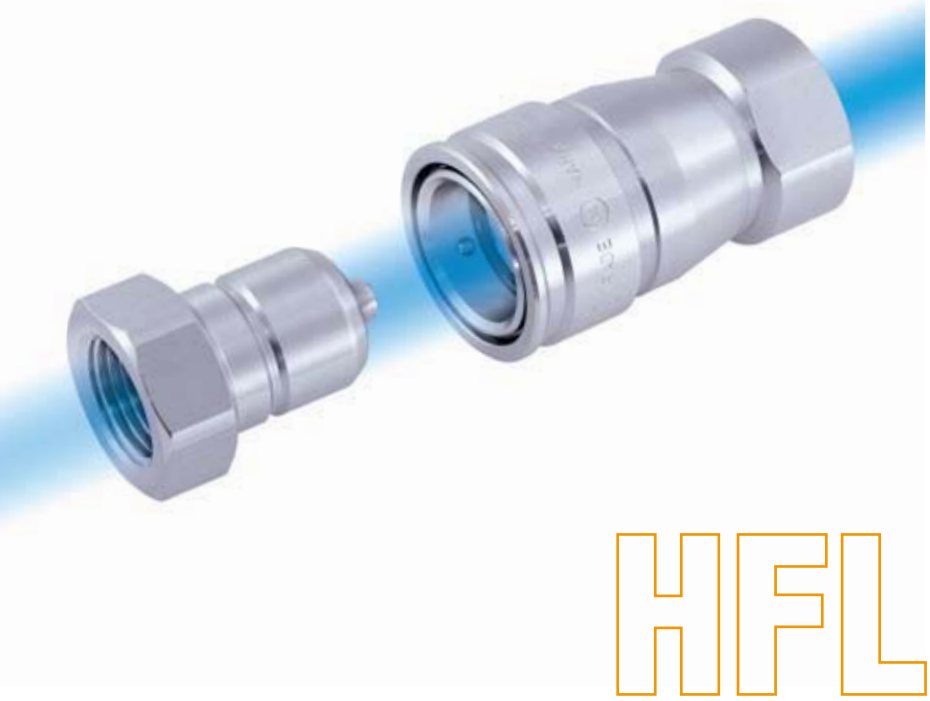
Model	Mass (g)	Dimensions (mm)						
		Lp	C	øD	Hp (WAF)	A (WAF)	øB	T (Female thread)
SCF-2P-3	53	(67.2)	(31.2)	32.5	Hex.30	24	27	Rc 3/8
SCF-3P-4	79	(71.2)	(35.2)	39	Hex.36	30	33	Rc 1/2

Socket



Model	Mass (g)	Dimensions (mm)					
		Ls	øA	Hs (WAF)	D	E	T (Female thread)
SCF-2S-3	83	(92)	27	24	(45)	33	Rc 3/8
SCF-3S-4	124	(102.5)	33	30	(51)	39	Rc 1/2

High Flow Cupla



HFL

Minimizes pressure drop and increases flow volume drastically. Compared with conventional SP Cupla, flow volume has been increased by up to 80%.

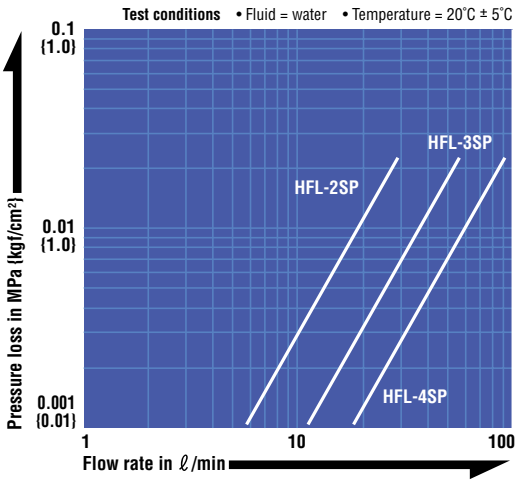
- Both socket and plug have built-in automatic shut-off valves.
- High flow rate type to increase cooling effect.
- Quick connection and disconnection of cooling pipes.
- Compact and space-saving design.
- Installation and maintenance can be done within a short time.

Specifications

Model	HFL-2P / HFL-2S	HFL-3P / HFL-3S	HFL-4P / HFL-4S
Applicable fluids	Water • heat transfer fluids		
Body material	Stainless steel		
Working pressure *1	1.0MPa {10kgf/cm^2}		
Pressure resistance *2	1.5MPa {15kgf/cm^2}		
Seal material	Ethylene-propylene rubber [EPDM (EPT)]		
	Made-to-order item: Fluoro rubber [FKM (X-100)]		
Working temperature range	−40˚C~+150˚C (Ethylene-propylene rubber) / −20˚C~+180˚C (Fluoro rubber)		
Automatic shut-off valve	Both socket and plug have built-in automatic shut-off valves		
Interchangeable Cupla	High Flow Cupla		
Size	1/4''	3/8''	1/2''
Max. Tightening Torque	14N • m {140kgf • cm}	22N • m {220kgf • cm}	60N • m {600kgf • cm}
Min. Cross-Sectional Area	33mm^2	59mm^2	93mm^2

*1 : This shows the normal allowable fluid pressure under continuous use.
*2 : This shows the maximum pressure that will not affect the performance of the Cupla even if there is a temporary increase to reach the pressure.

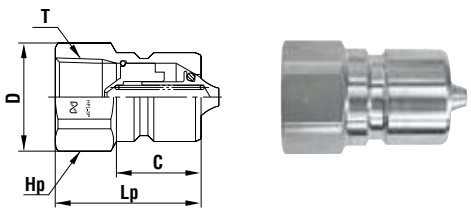
Flow Rate – Pressure Loss Characteristics



Models and Dimensions

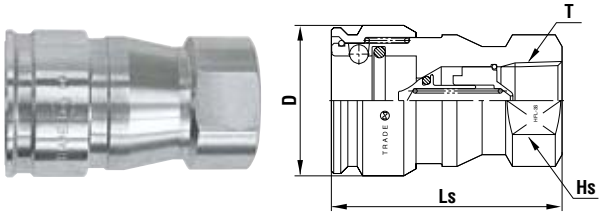
WAF : WAF stands for width across flat.

Plug



Model	Application	Mass (g)	Dimensions (mm)				
			Lp	C	øD	Hp (WAF)	T
HFL-2P	R 1/4	28	30	16.5	18.5	Hex.17	Rc 1/4
HFL-3P	R 3/8	43	31	18	23	Hex.21	Rc 3/8
HFL-4P	R 1/2	82	37.5	22.5	32	Hex.29	Rc 1/2

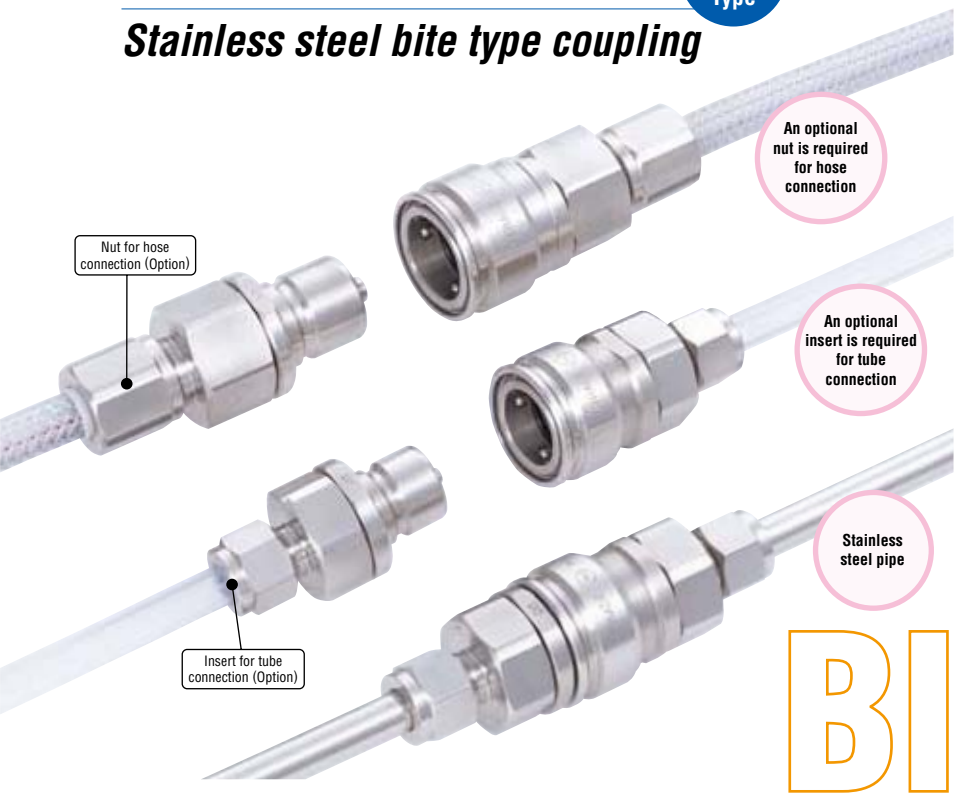
Socket



Model	Application	Mass (g)	Dimensions (mm)			
			Ls	øD	Hs (WAF)	T
HFL-2S	R 1/4	99	(47)	26	19	Rc 1/4
HFL-3S	R 3/8	150	(49)	32	24	Rc 3/8
HFL-4S	R 1/2	211	60	35	29	Rc 1/2

High Flow Cupla BI Type

Stainless steel bite type coupling



High Flow Cupla and bite type fitting are united to realize efficient piping.

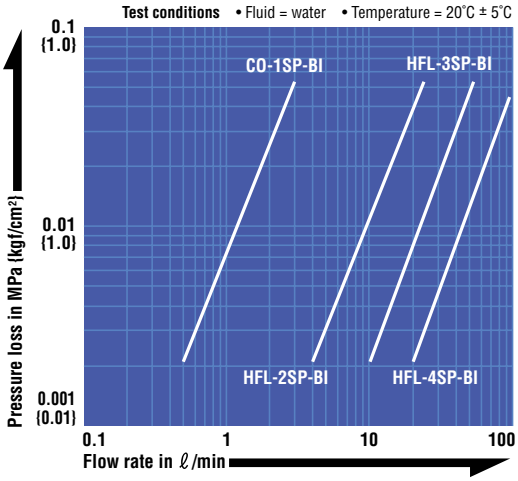
- Easy connection with stainless steel pipe.
- With an optional hose connection kit, connection to plastic hose is possible.
- Connection with various tubes can be done if an appropriate insert to the tube is used.

Specifications

Model	CO-1P-BI 1/8 CO-1S-BI 1/8	HFL-2P-BI 1/4 HFL-2S-BI 1/4	HFL-2P-BI 3/8 HFL-2S-BI 3/8	HFL-3P-BI 3/8 HFL-3S-BI 3/8	HFL-3P-BI 1/2 HFL-3S-BI 1/2	HFL-4P-BI 1/2 HFL-4S-BI 1/2
Applicable fluids	Water • Heat transfer fluids					
Body material	Stainless steel					
Working pressure *1	1.0MPa {10kgf/cm²}					
Pressure resistance *2	1.5MPa {15kgf/cm²}					
Seal material	Ethylene-propylene rubber [EPDM (EPT)]					
	Made-to-order item: Fluoro rubber [FKM (X-100)]					
Working temperature range	−40°C~+150°C (Ethylene-propylene rubber) / −20°C~+180°C (Fluoro rubber)					
Automatic shut-off valve	Both socket and plug have built-in automatic shut-off valves					
Interchangeable Cupla	Compact Cupla	High Flow Cupla				

*1 : This shows the normal allowable fluid pressure under continuous use.
*2 : This shows the maximum pressure that will not affect the performance of the Cupla even if there is a temporary increase to reach the pressure.

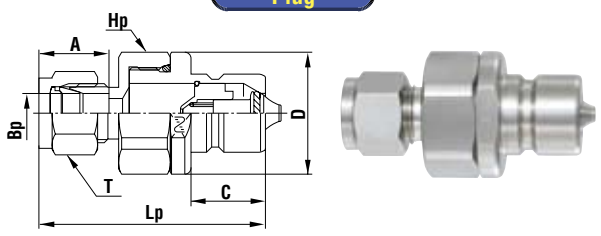
Flow Rate – Pressure Loss Characteristics



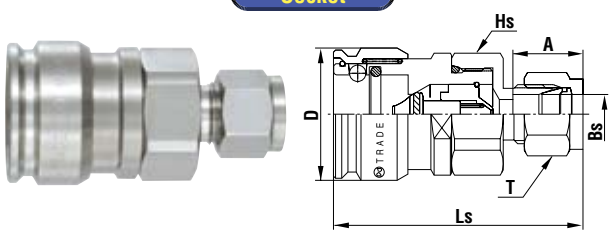
Models and Dimensions

WAF : WAF stands for width across flat.

Plug



Socket



Model	Application (Pipe size)	Dimensions (mm) Lp	C	A	øD	øBp	Hp (WAF)	T (WAF)
CO-1P-BI 1/8	1/8''	(42.4)	11.3	(13)	15.5	3.18	Hex.9/16"	Hex.7/16"
HFL-2P-BI 1/4	1/4''	(51.9)	16.5	(15.4)	23	6.35	Hex.13/16"	Hex.9/16"
HFL-2P-BI 3/8	3/8''	(53.4)	16.5	(17)	23	9.53	Hex.13/16"	Hex.11/16"
HFL-3P-BI 3/8	3/8''	(54.8)	18	(17)	29.5	9.53	Hex.1 1/16"	Hex.11/16"
HFL-3P-BI 1/2	1/2''	(59)	18	(23)	29.5	12.7	Hex.1 1/16"	Hex.7/8"
HFL-4P-BI 1/2	1/2''	(68.7)	22.5	(23)	32	12.7	Hex.1 1/8"	Hex.7/8"

Model	Application (Pipe size)	Dimensions (mm) Ls	A	øD	øBs	Hs (WAF)	T (WAF)
CO-1S-BI 1/8	1/8''	(45.2)	(13)	16.5	3.18	Hex.9/16"	Hex.7/16"
HFL-2S-BI 1/4	1/4''	(54.9)	(15.4)	26	6.35	Hex.13/16"	Hex.9/16"
HFL-2S-BI 3/8	3/8''	(56.5)	(17)	26	9.53	Hex.13/16"	Hex.11/16"
HFL-3S-BI 3/8	3/8''	(60.3)	(17)	32	9.53	Hex.1 1/16"	Hex.11/16"
HFL-3S-BI 1/2	1/2''	(64.6)	(23)	32	12.7	Hex.1 1/16"	Hex.7/8"
HFL-4S-BI 1/2	1/2''	(73.2)	(23)	35	12.7	Hex.1 1/8"	Hex.7/8"

Cupla for piping of water and fluids for temperature control

Compact Cupla

CO

Compact 17.5mm outer diameter, yet socket and plug have built-in automatic shut-off valves.

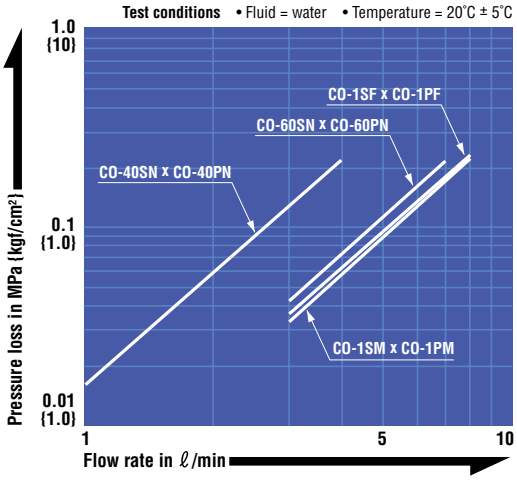
- Compact yet operator friendly sleeve design.
- For small bore piping from temperature control piping to scientific equipment.
- Body materials in stainless steel or brass, excellent in corrosion resistance.
- Four types of end configuration enable suitability with a wide range of piping applications.

Specifications

Model		CO-1PM / CO-1SM	CO-1PF / CO-1SF	CO-40PN / CO-40SN	CO-60PN / CO-60SN
Applicable fluids		Water and fluids for temperature control			
Body material		Brass, Stainless steel (SUS 304)			
Working pressure *1		1.0MPa {10kgf/cm²}			
Pressure resistance *2		1.5MPa {15kgf/cm²}			
Seal material		Fluoropolymer resin			
		Available on request : Ethylene-propylene rubber [EPDM (EPT)]			
Working temperature range		−20°C~+180°C (Fluoropolymer resin) / −40°C~+150°C (Ethylene-propylene rubber)			
Automatic shut-off valve		Both socket and plug have built-in automatic shut-off valves			
Size		1/8''	1/8''	ø4 x ø6	ø6 x ø8
Max. Tightening Torque	Brass	5N • m {51kgf • cm}			
	Stainless steel	9N • m {92kgf • cm}		7N • m {71kgf • cm}	
Min. Cross-Sectional Area		8.8mm²	8.8mm²	4.9mm²	8.8mm²

*1 : This shows the normal allowable fluid pressure under continuous use.
*2 : This shows the maximum pressure that will not affect the performance of the Cupla even if there is a temporary increase to reach the pressure.

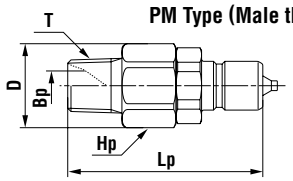
Flow Rate – Pressure Loss Characteristics



Models and Dimensions

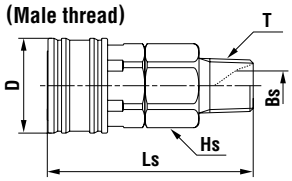
WAF : WAF stands for width across flat.

Plug — PM Type (Male thread)



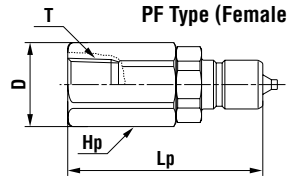
Model	Application	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	Lp	øD	Hp (WAF)	T	øBp
CO-1PM	Rc 1/8	20	19	(36)	15.5	Hex.14	R 1/8	5.5

Socket — SM Type (Male thread)



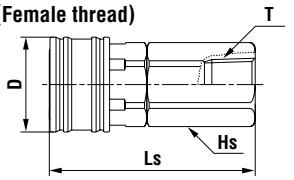
Model	Application	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	Ls	øD	Hs (WAF)	T	øBs
CO-1SM	Rc 1/8	34	32	(38)	17.5	Hex.14	R 1/8	5.5

Plug — PF Type (Female thread)



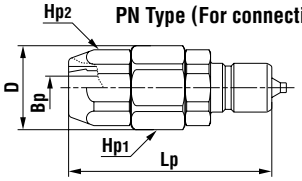
Model	Application	Body material, Mass (g)		Dimensions (mm)			
		Brass	Stainless steel	Lp	øD	Hp (WAF)	T
CO-1PF	R 1/8	25	23	(36)	15.5	Hex.14	Rc 1/8

Socket — SF Type (Female thread)



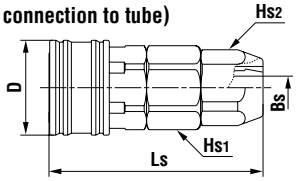
Model	Application	Body material, Mass (g)		Dimensions (mm)			
		Brass	Stainless steel	Ls	øD	Hs (WAF)	T
CO-1SF	R 1/8	39	36	(38)	17.5	Hex.14	Rc 1/8

Plug — PN Type (For connection to tube)



Model	Application (Tube)	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	Lp	øD	Hp1 (WAF)	Hp2 (WAF)	øBp
CO-40PN	ø4 x ø6	23	22	(38.5)	15.5	Hex.14	Hex.10	2.5
CO-60PN	ø6 x ø8	25	24	(37.5)	15.5	Hex.14	Hex.13	4.2

Socket — SN Type (For connection to tube)



Model	Application (Tube)	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	Ls	øD	Hs1 (WAF)	Hs2 (WAF)	øBs
CO-40SN	ø4 x ø6	38	35	(40.5)	17.5	Hex.14	Hex.10	2.5
CO-60SN	ø6 x ø8	40	37	(39.5)	17.5	Hex.14	Hex.13	4.2

*Brass type and stainless steel type Cuplas are in the same dimensions.

Body Material Selection Table (For reference)

The selection of appropriate body material for the Cupla is closely related to its usage application, the type of fluid run through, its concentration (%), the pressure, its working environment, etc. So the material must be carefully considered in order to use the Cupla efficiently and obtain its full performance. Since there are some metals that should not be used with certain fluids, please refer to this table when making your selection.

○ Suitable

△ Not suitable under certain conditions

*The body material must be selected and specified by the user.

	Fluids	Fluoropolymer resin	Stainless steel
A	Acetic acid	○	○
	Acetic anhydride	○	○
	Acetone	○	○
	Air	○	○
	Aluminium fluoride	○	
	Aluminum chloride	○	△
	Aluminum sulfate	○	△
	Ammonia	○	○
	Ammonium nitrate	○	○
	Ammonium phosphate	○	○
	Ammonium sulfate	○	
	Aniline	○	○
	Arsenic acid	○	○
B	Barium chloride	○	
	Barium hydroxide	○	○
	Barium sulfide	○	○
	Benzene	○	○
	Benzine	○	○
	Boric acid	○	○
	Butane	○	○
	Butyl acetate	○	○
C	Calcium chloride	○	
	Calcium hydroxide	○	○
	Carbon dioxide	○	○
	Carbon disulfide	○	○
	Carbon tetrachloride	○	○
	Caustic soda	○	○
	Chlorine	○	○
	Chromic acid	○	○
	Citric acid	○	○
	Cresol acid	○	○
D	Dowtherm		○
	Drinking water	○	○
E	Ether	○	○
	Ethyl acetate	○	○
	Ethyl alcohol	○	○
	Ethylene chloride	○	
	Ethylene glycol	○	○
F	Ferric chloride	○	

	Fluids	Fluoropolymer resin	Stainless steel
F	Ferric sulfate	○	△
	Formaldehyde	○	○
	Formalin	○	○
	Formic acid	○	○
G	Glycerine	○	○
H	Hexane	○	○
	Hydrobromic acid	○	
	Hydrochloric acid	○	
	Hydrofluoric acid	○	○
	Hydrogen	○	○
	Hydrogen peroxide	○	○
	Hydrogen sulfide	○	△
L	Lactic acid	○	○
M	Magnesium chloride	○	
	Methyl alcohol	○	○
N	Naphthalene	○	○
	Nickel chloride	○	○
	Nitric acid	○	△
	Nitrobenzene	○	○
O	Oxygen	○	○
P	Phenol	○	○
	Phosphoric acid	○	○
	Potassium chloride	○	△
	Potassium hydroxide	○	○
	Pure water	○	○
S	Salt water	○	△
	Sodium carbonate	○	○
	Sodium chloride	○	○
	Sodium hydroxide	○	○
	Sodium nitrate	○	○
	Sodium phosphate	○	△
	Sodium sulfate	○	○
	Sulfuric acid	○	
	Sulfurous acid	○	
T	Tannic acid		○
Z	Zinc chloride	○	

Seal Material Selection Table (For reference)

For seal parts in the Cupla (the important parts that prevent leaking to the outside), it is important to select the most appropriate seal material to suit the property and temperature of the fluid. It is so important that wrong selection may not only completely malfunction the Cupla but also cause an unexpected accident.

*The rubber material must be selected and specified by the user.

	Fluids	Seal Material		
		Fluoro rubber	Ethylene-propylene rubber	Perfluoroelastomer
A	Acetaldehyde	—	○	◎
	Acetic anhydride	—	○	◎
	Acetone	—	◎	◎
	Acetonitrile	—		○
	Acetophenone	—	◎	◎
	Acetylacetone	—	◎	◎
	Acetyl chloride	◎	—	
	Air (50˚C)	◎	◎	◎
	Aluminium bromide (65˚C)	◎	◎	
	Aluminium chloride (65˚C)	◎	◎	
	Aluminium nitrate (65˚C)	—	◎	
	Aluminium sulfate (65˚C)	◎	◎	
	Amine	—	○	○
	Ammonia (anhydrous)	—	◎	
	Ammonia (cool)	—	◎	
	Ammonia (65˚C)	—	○	
	Ammonia gas	—	◎	
	Ammonium carbonate	—	◎	
	Ammonium chloride	—	◎	
	Ammonium hydroxide	○	◎	
	Ammonium nitrate (65˚C)	—	◎	
	Ammonium phosphate (65˚C)	—	◎	
	Ammonium sulfate (65˚C)	—	◎	
	Ammonium sulfite	—	◎	
	Amyl acetate	—	△	○
	Amyl alcohol	○	◎	○
	Aniline	△	○	◎
	Arsenic trichloride	—	—	
B	Barium chloride	◎	◎	
	Barium hydroxide (65˚C)	◎	◎	
	Barium nitrate (65˚C)	◎	—	
	Barium sulfate (65˚C)	—	—	
	Barium sulfide	◎	◎	
	Benzaldehyde	—	◎	
	Benzene	◎	—	
	Benzyl alcohol (65˚C)	◎	○	
	Benzyl chloride	◎	—	
	Bromine	◎	—	◎

	Fluids	Seal Material		
		Fluoro rubber	Ethylene-propylene rubber	Perfluoroelastomer
B	Bromine water	◎	—	
	Butadiene	○	△	
	Butane	◎	—	
	Butane (liquid)	◎	—	
	Butane (2.2-, 3-dimethyl)	◎	—	
	Butanol (Butyl alcohol)	◎	○	
	Butyl acetate	—	○	○
	Butyl stearate	◎	—	
	Butylene	◎	—	
	Butyraldehyde	—	○	○
C	Calcium acetate	—	◎	
	Calcium acetate (65˚C)	—	◎	
	Calcium carbide	—	—	
	Calcium carbonate	—	—	
	Calcium hydroxide (65˚C)	◎	◎	
	Calcium nitrate (65˚C)	◎	◎	
	Calcium perchlorate	—	—	
	Calcium sulfate	—	—	
	Calcium sulfate (65˚C)	—	—	
	Calcium sulfite	◎	—	
	Carbitol	○	○	
	Carbon dioxide gas (65˚C)	○	○	
	Carbon disulfide	◎	—	
	Carbon monoxide (65˚C)	◎	◎	
	Carbon tetrachloride	◎	—	◎
	Chlorine gas	◎	—	
	Chlorine (liquid)	—	—	
	Chlorine water	◎	○	
	Chloroacetone	—	◎	
	Chlorobenzene	◎	—	
	Chloroform	◎	—	◎
	Chlorophenol	◎	—	
	Copper chloride (65˚C)	◎	◎	
	Copper cyanide	◎	◎	
	Copper sulfate	◎	◎	
	Cresol (50˚C)	◎	—	
D	Diacetone alcohol	—	◎	◎
	Dibenzyl ether	—	○	

	Fluids	Seal Material		
		Fluoro rubber	Ethylene-propylene rubber	Perfluoroelastomer
D	Dichlorophenol	◎	—	
	Diethanolamine	—	○	
	Diethylene glycol	◎	◎	
E	Ethanol	◎	◎	◎
	Ethyl acetate	—	○	
	Ethyl alcohol	◎	◎	◎
	Ethyl benzene	◎	—	◎
	Ethyl cellulose	—	○	
	Ethyl chloride	◎	◎	
	Ethylene glycol	◎	◎	◎
	Ethylene trichloride	◎	—	
F	Fluorine (dry)	—	—	○
	Formaldehyde	—	—	
	Furfural	—	○	◎
G	Glycerine (65˚C)	◎	◎	
	Glycol	◎	◎	
H	Helium	◎	◎	◎
	Heptane	—	—	
	Hexane	—	—	◎
	Hydrogen	◎	◎	
	Hydrogen bromide	—	—	○
	Hydrogen peroxide (30%)	○	○	
I	Iron chloride	◎	◎	
	Iron nitrate (65˚C)	◎	◎	
	Iron sulfate (10%)	—	—	
	Isooctane	◎	—	◎
	Isopropyl acetate	—	○	
	Isopropyl alcohol	◎	◎	
	Isopropyl ether	—	—	
K	Kerosene	◎	—	
L	Liquid glass (Sodium silicate)	—	—	
M	Magnesium chloride (65˚C)	◎	◎	
	Magnesium hydroxide (65˚C)	◎	◎	
	Magnesium nitrate	—	—	
	Magnesium sulfate (65˚C)	◎	◎	
	Maleic anhydride	◎	—	
	Methanol	—	◎	
	Methyl bromide	◎	—	

How to read the selection tables

◎ : Practically no harm, and can be used (Excellent)

○ : Some harm may be inevitable but can be used under restrictions (Good)

△ : Should be avoided if at all possible (Not recommended)

— : Should not be used (Unsuitable)

Note:

When selecting the seal material, please consider the following suggestions carefully:

1. If there is no comment in the column of the fluid name, the condition of the fluid is under saturation at room temperature.
2. Please check with us for applications at a high fluid temperature or with different fluid concentrations.
3. For applications related to foods, please order separately specifing the detailed applications.

	Fluids	Seal Material		
		Fluoro rubber	Ethylene-propylene rubber	Perfluoroelastomer
M	Methyl butyl ketone	—	◎	
	Methyl chloride	◎	△	
	Methyl ethyl ketone	—	◎	◎
	Methyl propyl ketone	—	○	
	Methyl salicylate	—	○	
	Methylene bromide	○	—	○
	Methylene chloride	◎	△	◎
	Monobromobenzene	◎	—	
	Monochlorobenzene	—	—	
	Monoethanolamine	—	○	
N	Naphthalene	◎	—	
	Nickel acetate	—	◎	
	Nickel acetate (65˚C)	—	◎	
	Nickel ammonium sulfate	—	—	
	Nickel chloride	◎	◎	
	Nickel nitrate	—	—	
	Nickel sulfate	—	—	
	Nitrobenzene	○	—	◎
	Nitrogen (gas)	◎	◎	◎
	Normal heptane	◎	—	
	Normal pentane	◎	—	
O	Octyl alcohol	◎	◎	
	Oleic acid (65˚C)	○	—	
	Ortho-dichlorobenzene	◎	—	
	Oxygen (gas)	◎	◎	◎
	Ozone	◎	◎	
P	Pentane (2-,3-,4-methyl)	—	—	
	Phenol	◎	—	
	Phosphorus	—	—	
	Phosphorous oxychloride (dry)	◎	◎	
	Phosphorous oxychloride (wet)	◎	◎	
	Phthalic anhydride	—	—	
	Potassium acetate (65˚C)	—	◎	
	Potassium bichromate	◎	◎	
	Potassium carbonate	—	—	
	Potassium cyanide	◎	◎	
	Potassium hydroxide (65˚C)	—	◎	
	Potassium nitrate (65˚C)	◎	◎	

	Fluids	Seal Material		
		Fluoro rubber	Ethylene-propylene rubber	Perfluoroelastomer
P	Potassium nitrite	—	◎	
	Potassium phosphate	—	—	
	Potassium silicate	◎	◎	
	Potassium sulfate	◎	◎	
	Potassium thiosulfate	—	—	
	Propyl acetate	—	○	
	Propyl alcohol (65˚C)	◎	◎	
	Propylene	◎	—	
	Pyridine	—	○	◎
S	Sodium acetate	—	◎	
	Sodium aluminate	—		
	Sodium carbonate	◎	◎	
	Sodium chloride	◎	◎	
	Sodium chloride (salt water)	◎	◎	
	Sodium cyanide	—	◎	
	Sodium hydroxide (50%)	△	◎	◎
	Sodium hydroxide (50˚C)	—	◎	
	Sodium hypochlorite	◎	○	◎
	Sodium iodide	—	—	
	Sodium metaphosphate	◎	◎	
	Sodium nirate	◎	◎	
	Sodium nitrite	—	◎	
	Sodium peroxide	◎	◎	
	Sodium phosphate	—	—	
	Sodium plumbate	—	—	
	Sodium silicate	◎	◎	
	Sodium sulfate	◎	◎	
	Sodium sulfide	◎	◎	
	Sodium sulfite	◎	◎	
	Sodium thiosulfate	—	—	
	Sulfur	◎	◎	
	Sulfur chloride (dry)	◎	—	
	Sulfur dioxide	◎	◎	
	Sulfur tetroxide	◎	—	◎
T	Tetraethyl lead	◎	—	
	Tetralin	◎	—	
	Titanium terachloride	◎	—	
	Toluene (Toluol)	△	—	◎

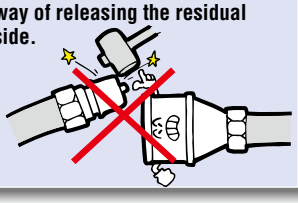
	Fluids	Seal Material		
		Fluoro rubber	Ethylene-propylene rubber	Perfluoroelastomer
T	Triethanolamine	—	○	
V	Vinyl acetate	—	◎	
	Vinyl chloride	◎	△	
	Vinyl chloride resin	◎	—	
W	Water (65˚C)	◎	◎	◎
X	Xylene	◎	—	◎
Z	Zinc chloride (65˚C)	◎	◎	
	Zinc sulfate (65˚C)	◎	◎	

Safety Guide

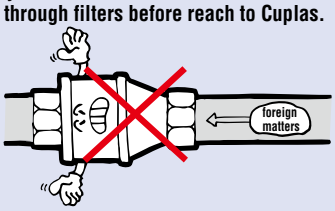
Be sure to read this page before using Cupla.

1
- Do not connect / disconnect under dynamic pressure or static residual pressure.

2
- Do not strike the tip of an automatic shut-off valve with a hammer or the like. This may cause leakage or malfunction. Consult us for alternative way of releasing the residual pressure inside.

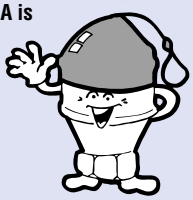


3
- The entry of foreign matters in the fluid to be used may cause a breakdown. Fluid must be cleaned through filters before reach to Cuplas.



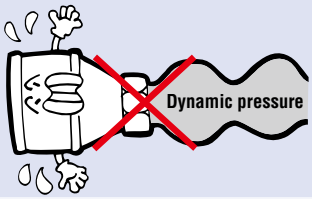
4
- Selecting the wrong type of seal material may cause a leak. In making your selection, check the compatibility of the seal material with the type of fluid and temperature.

5
- Remember that dirt, scratches or other damage on the sealing surface may cause a leak.
- If there is a risk of dirt sticking to the plug sealing while the CUPLA is disconnected, use a specified dustproof cap.

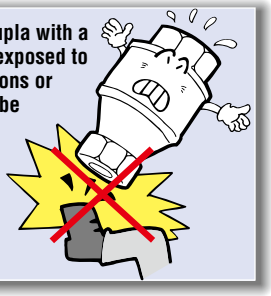


6
- When installing the Cupla, do not apply an excessive tightening force. This may cause damage. Tighten it with the appropriate torque.

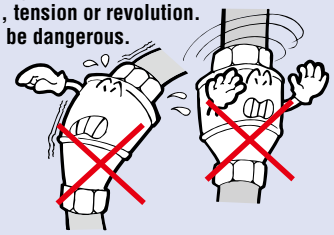
7
- Do not pressurize the socket or plug while disconnected.



8
- Do not use the Cupla with a tool or machine exposed to excessive vibrations or impact. It would be dangerous.



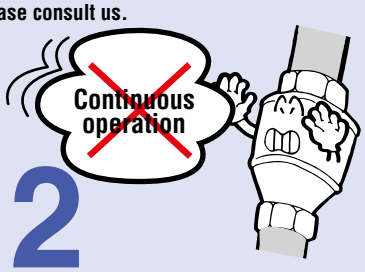
9
- Do not subject the CUPLA to excessive bending, tension or revolution. It would be dangerous.



10
- The CUPLA is usually greased to reduce the load imposed when the plug is inserted. But the SEMICON CUPLA is grease-free to prevent grease from entering into the fluid system. To reduce sliding resistance (insertion load) and protect an O-ring, apply the fluid to be used or pure water to the O-ring or plug (the sliding part of the O-ring) before use.

11
- In cleaning the CUPLA, do so in a manner that will not affect the seal material. (Before cleaning, consult us.)

12
- Do not use continuously at the lowest or highest working temperature. In this case please consult us.



Performance Standards and Contractual Control Limit

Please understand that the performance chart and outside dimensions indicated in this catalogue do not include the tolerances in mass production, and that they indicate the average as a guide for selecting models and for technical service for users.

Beware of imitations

Recently on the market, there have appeared similar products that invite misidentification or confusion with Nitto Kohki Cuplas, or such products that claim to have compatible mating parts.

Connection with a coupling of another brand that seems connectable to a Nitto Kohki Cupla may cause
1) imperfect connection or disconnection
2) reduced airtightness
3) impaired pressure resistance or durability
4) declined flow rate, and result in unexpected accidents.

Nitto Kohki cannot accept resposibility for any accident that may result by mixed use with the coupling of another brand. Nitto Kohki Cuplars are produced with their own unique tolerances and precision under strict quality control, and are not interchangeable with other couplings that are not under such tolerrance. Therefore, connection to other brand of coupling may end up with abrupt breakdown or personal injury. Please be sure to check for our marks below, which are always inscribed on Nitto Kohki Cupla products, when you order and purchase.

Safety Guide

Warning / Cautions

Before using a CUPLA, please read the instructions given below and be sure to observe all precaustions.

Warning

- Do not use Cuplas continuously under any pressure exceeding the rated working pressure. This may cause a leak or damage.
- Use only within the range of rated temperature. Otherwise this may damage the seal material inside and cause leakage.
- The fluid media used must be compatible with the body and seal materials of Cupla.
- Any spillage or droplet of the fluid used must only be handled by a qualified technician engaged in such fluids.
- Do not connect/disconnect under dynamic pressure or static residual pressure.
- When any pressure tank is used, be sure to reduce the nitrogen gas pressure to 0MPa {0kgf/cm^2} and reduce the tank inner pressure similarly to 0MPa {0kgf/cm^2}, then disconnect the CUPLA on the liquid side.
  Connect the CUPLA on the liquid side before connecting the CUPLA on the nitrogen gas side.
- Do not connect with other brands' quick connective couplings.
- Wear protective equipment to avoid any spillage or droplet of the fluid.

Cautions

- Prior to initial use, the seal material and body material should be tested to confirm the material suitablility for the fluid.
- Apply a fluoropolymer resin sealant tape on male tapered pipe threads to ensure no leak.
- Mount stainless steel Semicon Cupla so as not to bring about galling of threads.
- Small amount of fluid will spill out at disconnection. In order to avoid any foreseeable danger, purge out the fluid inside the Cupla with nitrogen gas or something similar before disconnection.
- Do not use as a swivel joint.
- Use Cuplas only for the purpose of quick connective couplings.
- The fluoropolymer resin is soft. Threfore take care not to scratch, dent or otherwise damage it.
  The seal has a particular risk to become a source of leakage.
- Do not apply any artificial impact, bend, or tension other than necessary in connection and disconnection.
  This may cause leakage or damage.
- Do not pressurize the socket or plug with fluid while left disconnected. This may cause possible valve blow out.
- After the Cupla has been used for a long time as connected and pressured, its performance may decline because it is made of fluoropolymer resin. To ensure a long life for the Cupla, keep it under no pressure unless necessary.
- The O-ring of the socket must be replaced periodically because it is consumables.
- Be sure to mount a proper dust cap while the Cuplas are left disconnected.
- Do not disassemble.
- Check up on Cuplas periodically. If anything unusual is found, stop using the Cuplas until properly repaired or replaced with new ones.
- Apply the fluid used or pure water on the O-ring or plug (cylindrical part where the O-ring slides over) to reduce sliding friction (insertion load) and protect the O-ring from wear & tear (SP type) (SCS type).
- Do not use any product of any size other than an applicable tube size (SCF type).
- Consult us for the end configurations of the plug (SCF type).

SEMICON CUPLA Series

Production sites with high quality and reliability achieved by integrated production and a flexible supply system.

The large-scale production sites having a flexible mass-production capacity run fully every day.
With their advanced integrated system ranging from parts processing to product assembly to inspection of completed products, these sites offer a perfect supply system capable of meeting market needs.

Tochigi Nitto Kohki Co., Ltd.

CUPLA
"CUPLA" is a registered trademark of Nitto Kohki Corporation.

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NITTO KOHKI Co.,LTD. Headquarters Research Center

ISO 9001 JQA-2025
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★Specifications and designs are subject to change at any time without notice.

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