

# Stainless Steel Hi Cupla Series



Cupla for Air / Water

**Hi Cupla**

**Hi Cupla BL** **NEW**

**Nut Cupla** **NEW**



For low pressure

# Hi Cupla

**Stainless steel**

**Universal purpose couplings for air lines**

Working pressure



1.5MPa  
(15kgf/cm<sup>2</sup>)

Valve structure



One-way shut-off

Applicable fluids



Air

Water

From factory air line and pneumatic tool connection to water supply line, available in various sizes and end configurations. Excellent durability.

- Suitable for air or water, but note that fluid will come out from the plug when disconnected.
- Steel and brass body materials are also available as standard.



## Min. Cross-Sectional Area (mm<sup>2</sup>)

### 20, 30, 40 type

Socket	Plug	20PH	20PM-PF	30PH	30PM-PF	40PH	40PM-PF
20SH		20	20	20	20	20	20
20SM-SF		20	33	33	33	33	33
30SH		20	33	33	33	33	33
30SM-SF		20	33	33	33	33	33
40SH		20	33	33	33	33	33
40SM-SF		20	33	33	33	33	33

### 400, 600, 800 type

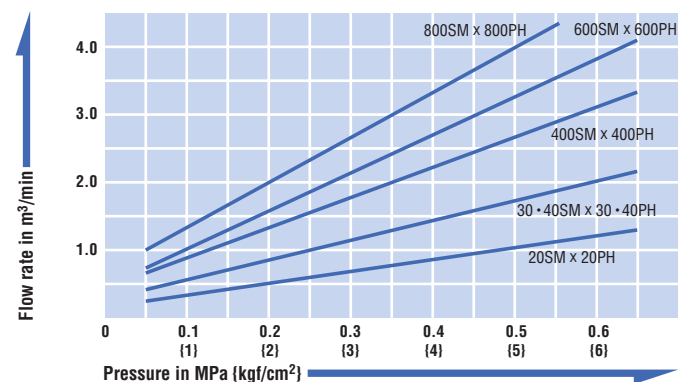
Socket	Plug	400PH	400PM-PF	600PH	600PM-PF	800PH	800PM-PF
400SH		64	64	64	64	64	64
400SM-SF		64	94	94	94	94	94
600SH		64	94	94	94	94	94
600SM-SF		64	94	94	94	94	94
800SH		64	94	94	94	94	94
800SM-SF		64	94	94	94	94	94

## Suitability for Vacuum

Not suitable for vacuum application in either connected or disconnected condition.

## Pressure – Flow Characteristics

[Test conditions] • Fluid : Air • Temperature : Room temperature



## Specifications

Body material	Stainless steel			
Size	1/4" (20 type) • 3/8" (30 type) • 1/2" (40 type, 400 type) • 3/4" (600 type) • 1" (800 type)			
Working pressure *1 MPa (kgf/cm <sup>2</sup> )	1.5 {15}			
Pressure resistance *2 MPa (kgf/cm <sup>2</sup> )	2.0 {20}			
Seal material *3 Working temperature range	Seal material	Mark	Working temperature range	Remarks
	Nitrile rubber	NBR (SG)	-20°C~+80°C	
	Fluoro rubber	FKM (X-100)	-20°C~+180°C	

\*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.

\*3 : Available seal material for Hi Cupla BL is standard nitrile rubber only.

## Max. Tightening Torque

N • m (kgf • cm)

Size	1/4"	3/8"	1/2"	3/4"	1"
Torque	14 {143}	22 {224}	60 {612}	100 {1020}	120 {1224}

## Flow Direction

Fluid must run from socket to plug when coupled.



## Interchangeability

- ① Sockets and plugs for Models 20 (1/4"), 30 (3/8") and 40 (1/2") can be connected with each other regardless of end configurations.
- ② Sockets and plugs for Models 400 (1/2"), 600 (3/4") and 800 (1") can be connected with each other regardless of end configurations. ① and ② can not be connected across each group.
- ③ Interchangeable with all other Hi Cupla Series products.

## Hi Cupla (Stainless Steel Series)

### Models and Dimensions

#### Plug PH type (Hose barb)

Model	Application (Hose)	Mass (g)	Dimensions (mm)						
			Lp	øHp	A	C	øT	øBp	øBd
20PHSUS	1/4"	26	57	16	30	20	9	5	7.5
30PHSUS	3/8"	27	61	16	34	20	11.3	7.5	7.5
40PHSUS	1/2"	47	63	20	36	20	15	7.5	7.5
400PHSUS	1/2"	67	66	22	36	23	15	9	13
600PHSUS	3/4"	129	77	30	45	23	21	13	13
800PHSUS	1"	150	85	34	54	23	27	20	13

#### Plug PM type (Male thread)

Model	Application	Mass (g)	Dimensions (mm)					
			Lp	Hp(WAF)	C	T	øBp	øBd
20PMSUS	Rc 1/4	27	41	Hex.14	20	R 1/4	7.5	7.5
30PMSUS	Rc 3/8	40	42	Hex.17	20	R 3/8	7.5	7.5
40PMSUS	Rc 1/2	62	46	Hex.22	20	R 1/2	12	7.5
400PMSUS	Rc 1/2	70	50	Hex.22	23	R 1/2	13	13
600PMSUS	Rc 3/4	115	55	Hex.32	23	R 3/4	19	13
800PMSUS	Rc 1	180	63	Hex.35	23	R 1	22	13

#### Plug PF type (Female thread)

Model	Application	Mass (g)	Dimensions (mm)					
			Lp	Hp(WAF)	C	T	øBd	
20PFSUS	R 1/4	30	36	Hex.17	20	Rc 1/4	7.5	
30PFSUS	R 3/8	41	37	Hex.21	20	Rc 3/8	7.5	
40PFSUS	R 1/2	69	38	Hex.29	20	Rc 1/2	7.5	
400PFSUS	R 1/2	81	41	Hex.29	23	Rc 1/2	13	
600PFSUS	R 3/4	118	45	Hex.35	23	Rc 3/4	13	
800PFSUS	R 1	192	54	Hex.41	23	Rc 1	13	



# Hi Cupla **BL**

Safety Sleeve-Lock Type

Stainless steel

Standard sleeve-lock mechanism is engaged by rotating sleeve after connection.

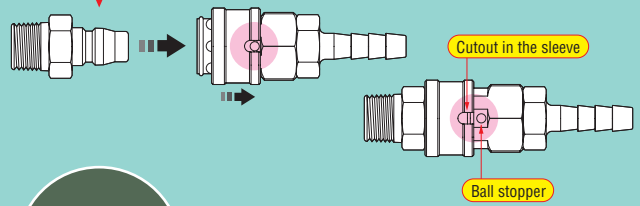
**NEW**



**Unlocked**

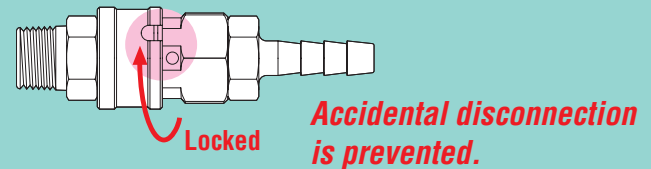
● Can be connected with the plugs of Hi Cupla.

Align the cutout in the sleeve with the ball stopper, and pull the sleeve to connect the plug.



**Locking the sleeve**

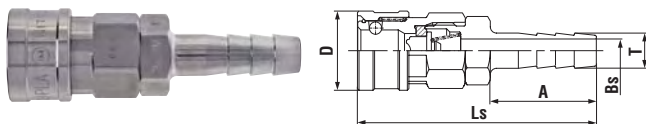
Sleeve-lock mechanism is engaged by rotating the sleeve after connection. Without alignment of the cutout with the ball stopper disconnection cannot be made.



● Below pictures are plugs and sockets of 20, 30 and 40 models.

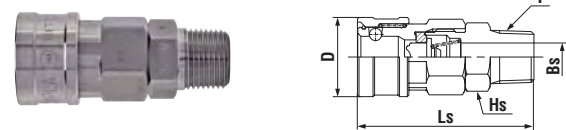
WAF : WAF stands for width across flat.

## Socket SH type (Hose barb)



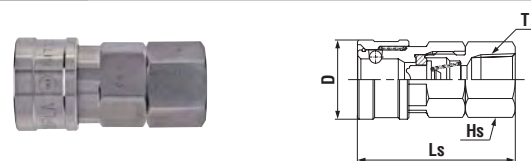
Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			Ls	σD	A	T	σBs
20SHSUS	1/4"	100	(72.5)	25.4	30	9	5
30SHSUS	3/8"	101	(76.5)	25.4	34	11.3	7.5
40SHSUS	1/2"	118	(78.5)	25.4	36	15	9
400SHSUS	1/2"	218	(83)	35	36	15	9
600SHSUS	3/4"	242	(92)	35	45	21	14
800SHSUS	1"	272	(102)	35	55	27	16

## Socket SM type (Male thread)



Model	Application	Mass (g)	Dimensions (mm)				
			Ls	σD	Hs (WAF)	T	σBs
20SMSUS	Rc 1/4	96	(55.5)	25.4	Hex.19	R 1/4	7
30SMSUS	Rc 3/8	105	(56.5)	25.4	Hex.19	R 3/8	8
40SMSUS	Rc 1/2	120	(59.5)	25.4	Hex.22	R 1/2	9
400SMSUS	Rc 1/2	207	(63)	35	Hex.29	R 1/2	13
600SMSUS	Rc 3/4	241	(67)	35	Hex.32	R 3/4	16
800SMSUS	Rc 1	303	(72)	35	Hex.36	R 1	16

## Socket SF type (Female thread)



Model	Application	Mass (g)	Dimensions (mm)			
			Ls	σD	Hs (WAF)	T
20SFSUS	R 1/4	98	(49.5)	25.4	Hex.19	Rc 1/4
30SFSUS	R 3/8	99	(50.5)	25.4	Hex.21	Rc 3/8
40SFSUS	R 1/2	138	(52.5)	25.4	Hex.29	Rc 1/2
400SFSUS	R 1/2	216	(57)	35	Hex.29	Rc 1/2
600SFSUS	R 3/4	258	(61)	35	Hex.35	Rc 3/4
800SFSUS	R 1	317	(68)	35	Hex.41	Rc 1

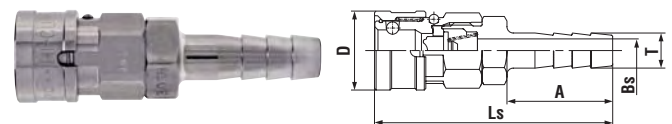
## Hi Cupla BL (Stainless Steel Series)

● Below pictures are sockets of 30 models.

Models and Dimensions

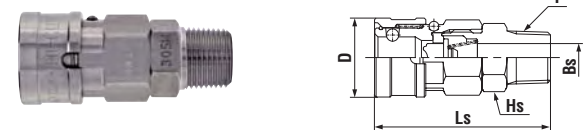
WAF : WAF stands for width across flat.

## Socket SH-BL type (Hose barb / with sleeve-lock mechanism)



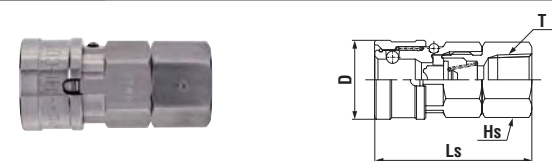
Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			Ls	σD	A	T	σBs
20SH LOCK SUS	1/4"	100	(72.5)	25.4	30	9	5
30SH LOCK SUS	3/8"	101	(76.5)	25.4	34	11.3	7.5
40SH LOCK SUS	1/2"	118	(78.5)	25.4	36	15	9

## Socket SM-BL type (Male thread / with sleeve-lock mechanism)



Model	Application	Mass (g)	Dimensions (mm)				
			Ls	σD	Hs (WAF)	T	σBs
20SM LOCK SUS	Rc 1/4	96	(55.5)	25.4	Hex.19	R 1/4	7
30SM LOCK SUS	Rc 3/8	105	(56.5)	25.4	Hex.19	R 3/8	8
40SM LOCK SUS	Rc 1/2	120	(59.5)	25.4	Hex.22	R 1/2	9

## Socket SF-BL type (Female thread / with sleeve-lock mechanism)



Model	Application	Mass (g)	Dimensions (mm)			
			Ls	σD	Hs (WAF)	T
20SF LOCK SUS	R 1/4	98	(49.5)	25.4	Hex.19	Rc 1/4
30SF LOCK SUS	R 3/8	99	(50.5)	25.4	Hex.21	Rc 3/8
40SF LOCK SUS	R 1/2	138	(52.5)	25.4	Hex.29	Rc 1/2

Hi Cupla BL is for socket only. Steel body is also available as standard.

For low pressure

# Nut Cupla

Stainless steel

For urethane hose connection

Working pressure



1.5MPa  
(15kgf/cm<sup>2</sup>)

Valve structure



One-way shut-off

Applicable fluids



Air

**NEW**

**No hose clamp required !**  
**Simple and secure connection to urethane hose.**

- To mount on hose, simply slide it over the hose barb and tighten the nut.
- The design to tighten outside of hose reduces hose slip away or fluid leaks.
- Steel body is also available as standard.



## Specifications

Body material	Stainless steel			
Size	mm	For hose of $\phi 6.5 \times \phi 10$ , $\phi 8 \times \phi 12$ , $\phi 8.5 \times \phi 12.5$		
Working pressure *1	MPa (kgf/cm <sup>2</sup> )	1.5 (15)		
Pressure resistance *2	MPa (kgf/cm <sup>2</sup> )	2.0 (20)		
Seal material	Seal material	Mark	Working temperature range	Remarks
Working temperature range	Nitrile rubber	NBR (SG)	-20°C~+60°C	Standard material

\*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.

## Tightening Torque Range

N·m (kgf·cm)

Model	65SN / 65PN	80SN / 80PN	85SN / 85PN
Torque	9~11 (92~112)		

## Flow Direction

Fluid must run from socket to plug when coupled.



## Interchangeability

Interchangeable with Hi Cupla Models 20, 30, and 40.

Interchangeable with each corresponding Hi Cupla Series models.

## Min. Cross-Sectional Area

(mm<sup>2</sup>)

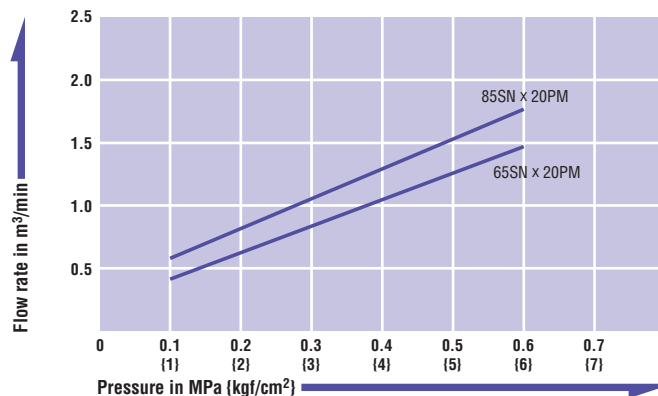
Socket	Plug	20PH	30PH	40PH	20PM	30PM	40PM	20PF	30PF	40PF
		65SN	20	22	22	22	22	22	22	22
80SN		20	33	33	33	33	33	33	33	33
85SN		20	33	33	33	33	33	33	33	33

## Suitability for Vacuum

Not suitable for vacuum application in either connected or disconnected condition.

## Pressure – Flow Characteristics

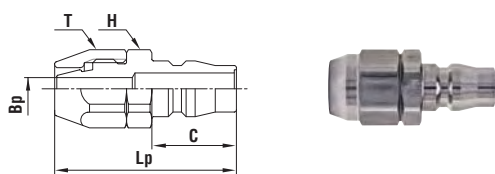
[Test conditions] • Fluid : Air • Temperature : Room temperature



## Models and Dimensions

WAF : WAF stands for width across flat.

### Plug PN type (For urethane hose connection)

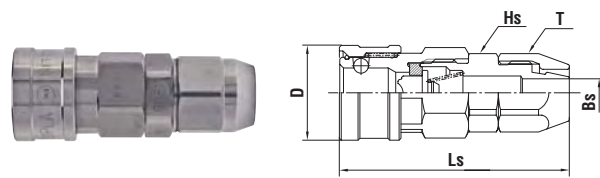


Model	Application (Hose)	Mass (g)	Dimensions (mm)					
			Lp	C	$\phi Bp$	$\phi Bd$	H (WAF)	T (WAF)
65PN NUT SUS	$\phi 6.5\text{mm} \times \phi 10\text{mm}$	43	(43)	20	5.3	7.5	Hex.17	Hex.17
80PN NUT SUS	$\phi 8\text{mm} \times \phi 12\text{mm}$	52	(45)	20	7.5	7.5	Hex.19	Hex.19
85PN NUT SUS	$\phi 8.5\text{mm} \times \phi 12.5\text{mm}$	53	(45)	20	7.5	7.5	Hex.19	Hex.19

● Grease is applied to the threaded part of the nut to prevent galling.

★ Specifications and designs are subject to change at any time without notice.

### Socket SN type (For urethane hose connection)



Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			Ls	$\phi D$	$\phi Bs$	Hs (WAF)	T (WAF)
65SN NUT SUS	$\phi 6.5\text{mm} \times \phi 10\text{mm}$	110	(59.5)	25.4	5.3	Hex.19	Hex.17
80SN NUT SUS	$\phi 8\text{mm} \times \phi 12\text{mm}$	114	(61.5)	25.4	7.5	Hex.19	Hex.19
85SN NUT SUS	$\phi 8.5\text{mm} \times \phi 12.5\text{mm}$	115	(61.5)	25.4	7.5	Hex.19	Hex.19



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