

For Low Pressure (Air)

Hi Cupla 200

Push-to-connect type for air lines

Working pressure



1.5 MPa
(15 kgf/cm²)

Valve structure



One-way shut-off

Applicable fluid



Air

Simple and secure push-to-connect type! Big flow rate!
End-face seal design.
Gives excellent handling touch.

- Just push the plug into the socket for simple and secure connection. This reduces connection time and improves efficiency.
- New valve design for low pressure loss to achieve flow rate increase (15% up over the conventional model).
- End-face seal is achieved when connected.
- Enhanced operability with low connection resistance.
- End-face seal design is superior to external seal with an O-ring due to no seal damage caused by exhausted lubrication.
- Available only with steel body. Not suitable for water or oil.
- Also available with quick connect/disconnect Tube Fitter type.



▼ With Tube Fitter

Specifications

Body material		Steel (Chrome-plated)		
Size	Thread and hose barb	1/4", 3/8", 1/2"		
	Tube barb (Tube fitter)	Polyurethane tube: Outside Dia. $\phi 6 \pm 0.1$, $\phi 8 \pm 0.15$, $\phi 10 \pm 0.15$ Polyamide tube: Outside Dia. $\phi 6^{+0.05}_{-0.08}$, $\phi 8^{+0.05}_{-0.1}$, $\phi 10^{+0.05}_{-0.1}$ Fluorine contained resin tube: Outside Dia. $\phi 6 \pm 0.07$, $\phi 8 \pm 0.07$, $\phi 10 \pm 0.07$		
Working pressure	MPa	1.5		
	kgf/cm ²	15		
	bar	15		
	PSI	218		
Seal material		Nitrile rubber	NBR (SG)	Working temperature range
Working temperature range		-20°C to +60°C		Remarks

• Above are specifications only for Cuplas. Working pressures, maximum pressures and working temperature ranges may vary depending on materials of the tube and its working temperature range.

Max. Tightening Torque

Nm (kgf·cm)

Size (Thread)	1/4"	3/8"	1/2"
Torque	14 {143}	22 {224}	60 {612}

Flow Direction

Fluid must run from socket to plug.



Interchangeability

Interchangeable with Hi Cupla Models 20, 30 and 40.
Interchangeable with each corresponding Hi Cupla Series models.

Min. Cross-Sectional Area

(mm²)

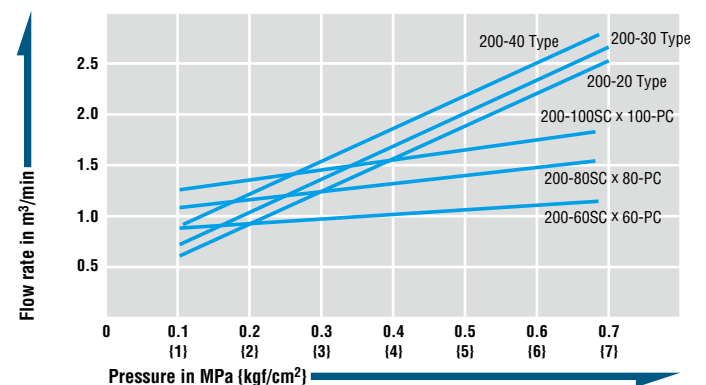
Socket	Plug	17PH	20PH	30PH	40PH	10PM	20PM	30PM	40PM	20PF	30PF	40PF
200-17SH		16	16	16	16	13	16	16	16	16	16	16
200-20SH		16	20	20	20	13	20	20	20	20	20	20
200-30SH		16	20	41	41	13	41	41	41	41	41	41
200-40SH		16	20	41	41	13	41	41	41	41	41	41
200-20SM		16	20	41	41	13	41	41	41	41	41	41
200-30SM		16	20	41	41	13	41	41	41	41	41	41
200-40SM		16	20	41	41	13	41	41	41	41	41	41
200-20SF		16	20	41	41	13	41	41	41	41	41	41
200-30SF		16	20	41	41	13	41	41	41	41	41	41
200-40SF		16	20	41	41	13	41	41	41	41	41	41

Suitability for Vacuum

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

Pressure - Flow Characteristics

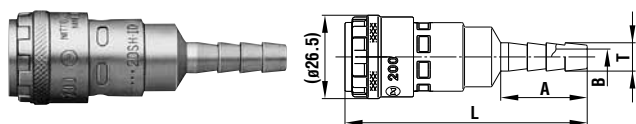
[Test conditions] • Fluid : Air • Temperature : Room temperature



Models and Dimensions

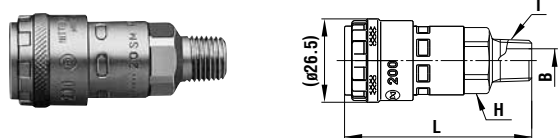
WAF : WAF stands for width across flats.

Socket SH type (Hose barb)



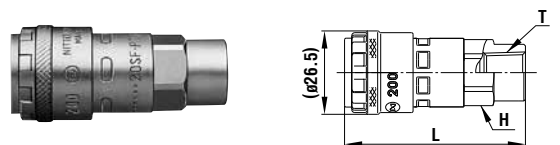
Model	Application (Hose)	Mass (g)	Dimensions (mm)			
			L	A	øT	øB
200-17SH	1/4"	86	(77)	27	7.2	4.5
200-20SH	1/4"	90	(77)	27.5	9	5
200-30SH	3/8"	92	(79)	32	11.3	7.5
200-40SH	1/2"	104	(79.5)	32	15	10

Socket SM type (Male thread)



Model	Application	Mass (g)	Dimensions (mm)			
			L	H(WAF)	T	øB
200-20SM	Rc 1/4	89	(60)	Hex.19	R 1/4	7.5
200-30SM	Rc 3/8	91	(60.5)	Hex.19	R 3/8	10
200-40SM	Rc 1/2	102	(56)	Hex.24	R 1/2	13

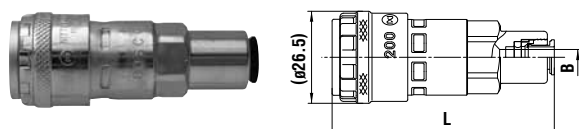
Socket SF type (Female thread)



Models	Application	Mass (g)	Dimensions (mm)		
			L	H(WAF)	T
200-20SF	R 1/4	94	(57.5)	Hex.19	Rc 1/4
200-30SF	R 3/8	103	(55.5)	Hex.22	Rc 3/8
200-40SF	R 1/2	138	(57.5)	Hex.29	Rc 1/2

Models and Dimensions (With Tube Fitter)

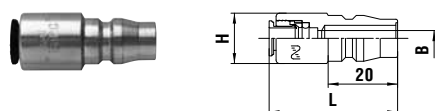
Socket SC type (Tube Fitter)



Model	Application	Mass (g)	Dimensions (mm)	
			L	øB
200-60SC	For 6 mm OD tube	100	(64)	5
200-80SC	For 8 mm OD tube	105	(67.5)	6.5
200-100SC	For 10 mm OD tube	123	(70.5)	8.5

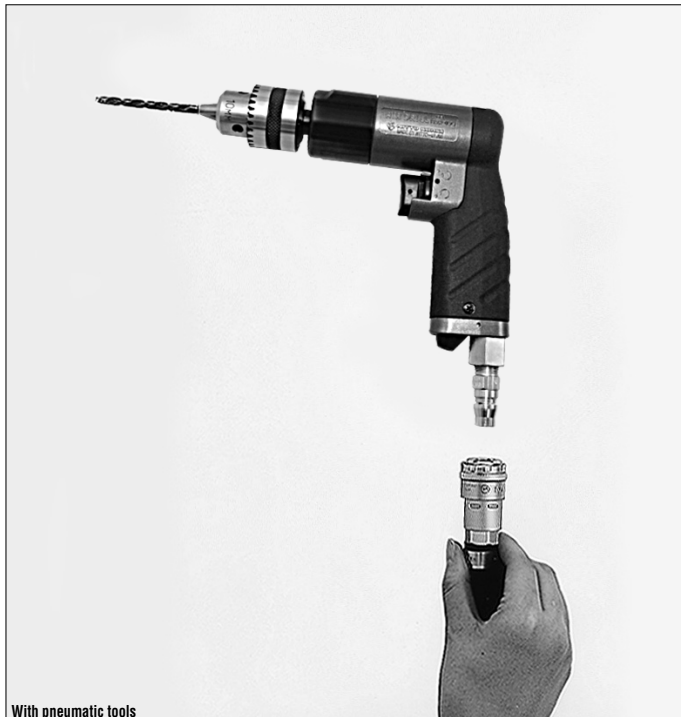
• The outer dimensions of Model 200-100SC are a little bit different from those of other models.

Plug PC type (Tube Fitter)

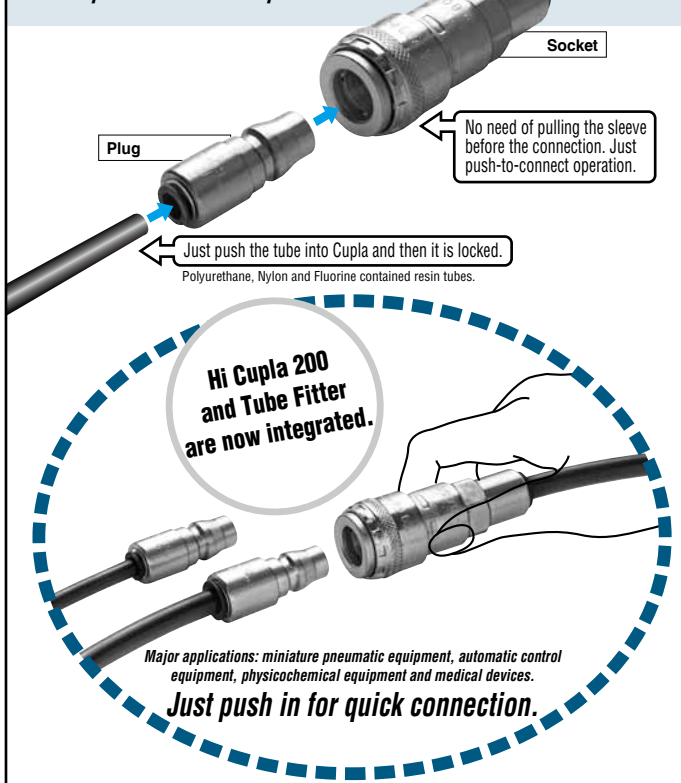


Model	Application	Mass (g)	Dimensions (mm)		
			L	øH	øB
60PC	For 6 mm OD tube	25	(37)	14.5	4.5
80PC	For 8 mm OD tube	30	(41)	16.5	6.5
100PC	For 10 mm OD tube	43	(45)	19.5	7.5

Application example



All of socket, plug and tube can be connected in one push-to-connect operation.

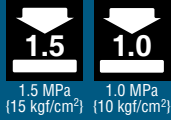


For Low Pressure (Air)

Hi Cupla for Connection to Braided Hoses Nut Cupla Nut Cupla 200 Rotary Nut Cupla

For connection to urethane hose

Working pressure



Valve structure



Applicable fluids (Steel applies to air only)



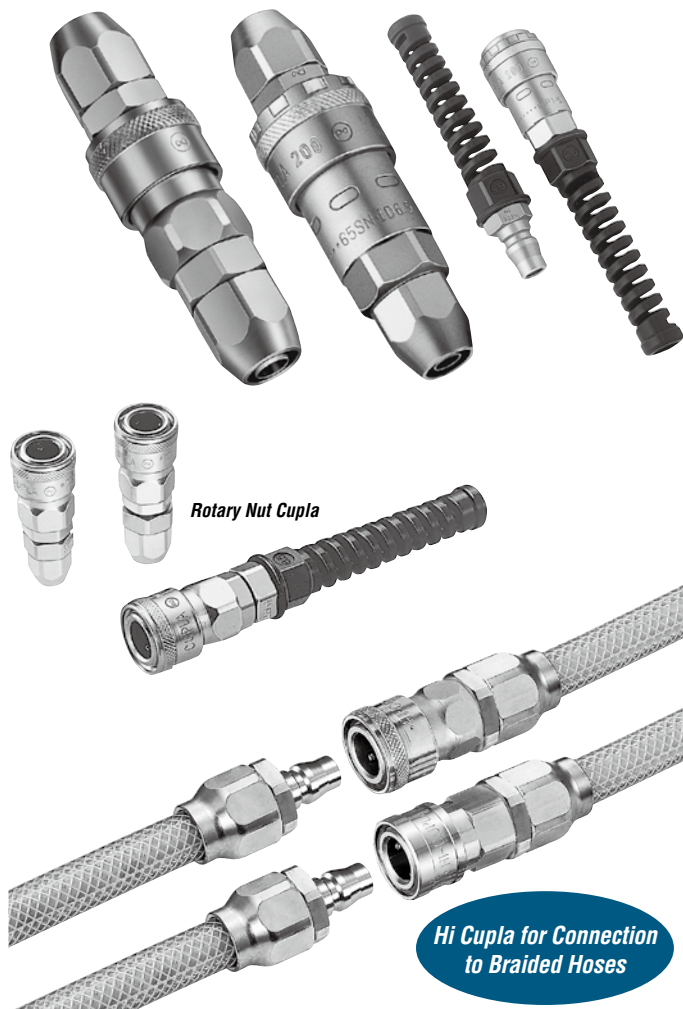
No hose clamp required!
Fitted with hose guard nut to prevent possible kinking.
Hi Cupla for connection to braided hoses is now available.

- Nut types are available in Hi Cupla Series and Hi Cupla 200 Series.
Hose guard nut type available to prevent hose kinking.
- To mount on hose, simply slide it over the nipple and tighten the nut.
- The design to tighten outside of hose reduces hose slip away or fluid leaks.
- Also available are Rotary Nut Cupla equipped with ball bearing swivel mechanism to prevent and relieve tension on operator's hands.

Nut Cupla

Nut Cupla 200

Nut Cupla 200 with hose guard nut



Specifications (Nut Cupla / Nut Cupla 200 / Rotary Nut Cupla)

Body material	Steel (Chrome-plated)			
Urethane hose size	For ø5 mm x ø8 mm, ø6 mm x ø9 mm hose For ø6.5 mm x ø10 mm, ø8 mm x ø12 mm hose For ø8.5 mm x ø12.5 mm, ø11 mm x ø16 mm hose			
Working pressure	MPa	1.5		
	kgf/cm ²	15		
	bar	15		
	PSI	218		
Seal material	Seal material	Mark	Working temperature range	Remarks
Working temperature range	Nitrile rubber	NBR (SG)	-20°C to +60°C	Standard material

Specifications (Hi Cupla for Connection to Braided Hoses)

Body material		Steel (Chrome-plated)		Brass	
Braided hose size		For ø9 mm x ø15 mm hose			
Working pressure	MPa	1.5		1.0	
	kgf/cm ²	15		10	
	bar	15		10	
	PSI	218		145	
Seal material		Seal material	Mark	Working temperature range	Remarks
Working temperature range		Nitrile rubber	NBR (SG)	-20°C to +80°C	Standard material

Working pressure and temperature range of PN/SN type for braided hoses depends upon the specification of the braided hose to be used.

Tightening Torque Range

Nm (kgf·cm)

Model	SN, PN, SNR Type	65SNG, PNG, SNRG Type	85SNG, PNG, SNRG Type
Torque	9 to 11 {92 to 112}	5 to 6 {51 to 61}	7 to 8 {71 to 82}

To mount on braided hose or urethane hose, slide it over to the hose barb and tighten the nut until it is flush against the hose barb base. It is recommended that grease is applied to the inside of the nut (threaded part and hose contact part) for easy tightening.

Flow Direction

Fluid must run from socket to plug.



Interchangeability

Interchangeable with Hi Cupla Models 10, 17, 20, 30 and 40.
Interchangeable with each corresponding Hi Cupla Series models.

Min. Cross-Sectional Area

(mm²)

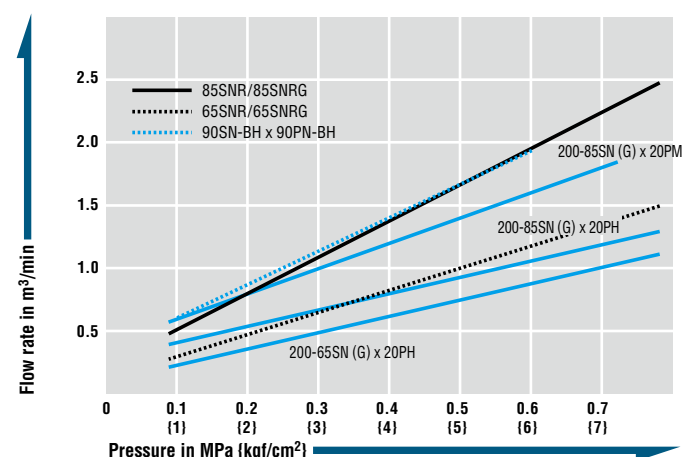
Socket	Plug	17PH	20PH	30PH	40PH	10PM	20PM	30PM	40PM	20PF	30PF	40PF	90PN-BH
200-50SN	16	16	16	16	13	16	16	16	16	16	16	16	16
200-60SN	16	20	22	22	13	22	22	22	22	22	22	22	22
200-65SN	16	20	22	22	13	22	22	22	22	22	22	22	22
200-80SN	16	20	41	41	13	41	41	41	41	41	41	41	41
200-85SN	16	20	41	41	13	41	41	41	41	41	41	41	41
200-110SN	16	20	41	41	13	41	41	41	41	41	41	41	41
200-50SNG	16	16	16	16	13	16	16	16	16	16	16	16	16
200-65SNG	16	20	22	22	13	22	22	22	22	22	22	22	22
200-85SNG	16	20	40	41	13	41	41	41	41	41	41	41	41
90SN-BH	16	20	33	33	13	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

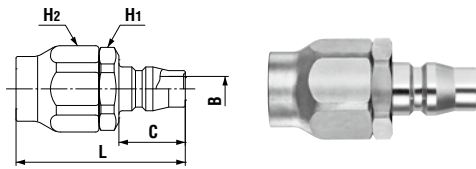


Hi Cupla for Connection to Braided Hoses / Nut Cupla / Nut Cupla 200 / Rotary Nut Cupla

Models and Dimensions (Nut Cupla / Nut Cupla 200)

WAF : WAF stands for width across flats.

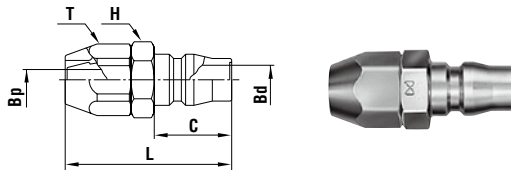
Plug PN type (Hi Cupla for connection to braided hoses)



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

Model	Application (Hose)	Wall Thickness (mm)	Body material*Mass (g)		Dimensions (mm)				
			Steel	Brass	L	H1(WAF)	H2(WAF)	C	øB
90PN-BH	ø9 x ø15	3±0.3	86	88	(51)	Hex.23	Hex.24	20	7.5

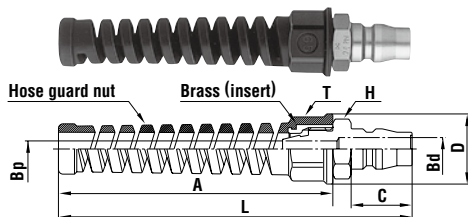
Plug PN type (For urethane hose connection)



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

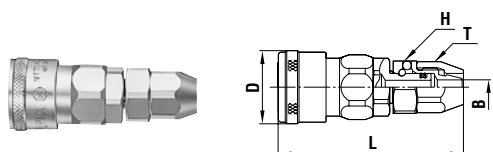
Model	Application (Hose)	Body material*Mass (g)		Dimensions (mm)					
		Steel	Stainless steel	L	C	øBp	øBf	H(WAF)	T(WAF)
50PN	ø5 x ø8	30	-	(43)	20	4.5	7.5	Hex.17	Hex.17
60PN	ø6 x ø9	40	-	(43)	20	5.3	7.5	Hex.17	Hex.17
65PN	ø6.5 x ø10	42	43	(43)	20	5.3	7.5	Hex.17	Hex.17
80PN	ø8 x ø12	50	52	(45)	20	7.5	7.5	Hex.19	Hex.19
85PN	ø8.5 x ø12.5	52	53	(45)	20	7.5	7.5	Hex.19	Hex.19
110PN	ø11 x ø16	75	-	(52)	20	7.5	7.5	Hex.23	Hex.24

Plug PNG type (For urethane hose with hose guard nut connection)



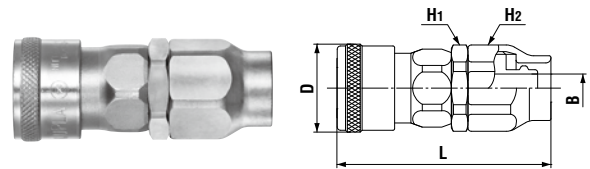
Model	Application (Hose)	Mass (g)	Dimensions (mm)							
			L	C	A	øD	øBp	øBf	H(WAF)	T(WAF)
50PNG *3	ø5 x ø8	41	(116)	20	90	23	4.5	7.5	Hex.17	Hex.19
65PNG	ø6.5 x ø10	43	(116)	20	90	23	5.3	7.5	Hex.17	Hex.19
85PNG	ø8.5 x ø12.5	55	(116)	20	90	26	7.5	7.5	Hex.19	Hex.22

Socket SNR type (With ball bearing swivel mechanism)



Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	øD	øB	H(WAF)	T(WAF)
65SNR	ø6.5 x ø10	120	(67.3)	(26.5)	5.3	Hex.19	Hex.17
85SNR	ø8.5 x ø12.5	136	(69.3)	(26.5)	7.5	Hex.21	Hex.19

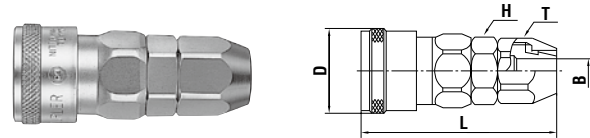
Socket SN type (Hi Cupla for connection to braided hoses)



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

Model	Application (Hose)	Wall Thickness (mm)	Body material*Mass (g)		Dimensions (mm)				
			Steel	Brass	L	øD	H1(WAF)	H2(WAF)	øB
90SN-BH	ø9 x ø15	3±0.3	147	154	(64.5)	(26.5)-1	Hex.24	Hex.24	8.5

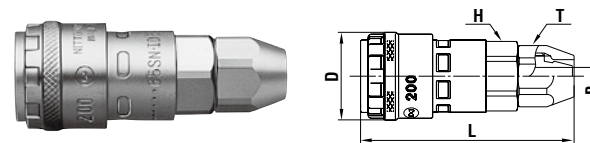
Socket SN type (For urethane hose connection)



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

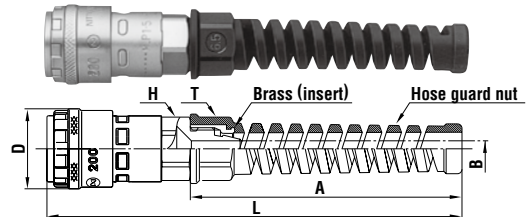
Model	Application (Hose)	Body material*Mass (g)		Dimensions (mm)				
		Steel	Stainless steel	L	øD	øB	H(WAF)	T(WAF)
50SN	ø5 x ø8	117	-	(60)	(26.5)	4.5	Hex.19	Hex.17
60SN	ø6 x ø9	115	-	(59.5)	(26.5)	5.3	Hex.19	Hex.17
65SN	ø6.5 x ø10	115	110	(59.5)	(26.5)-2	5.3	Hex.19	Hex.17
80SN	ø8 x ø12	120	114	(61.5)	(26.5)-2	7.5	Hex.19	Hex.19
85SN	ø8.5 x ø12.5	120	115	(61.5)	(26.5)-2	7.5	Hex.19	Hex.19
110SN	ø11 x ø16	153	-	(64.5)	(26.5)	10	Hex.23	Hex.24

Socket SN type (For urethane hose connection)



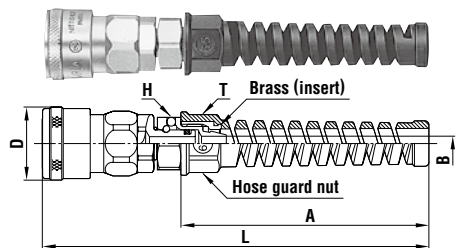
Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	øD	øB	H(WAF)	T(WAF)
200-50SN	ø5 x ø8	105	(64.5)	(26.5)	4.5	Hex.19	Hex.17
200-60SN	ø6 x ø9	105	(64.5)	(26.5)	5.3	Hex.19	Hex.17
200-65SN	ø6.5 x ø10	106	(64.5)	(26.5)	5.3	Hex.19	Hex.17
200-80SN	ø8 x ø12	112	(66.5)	(26.5)	7.5	Hex.19	Hex.19
200-85SN	ø8.5 x ø12.5	113	(66.5)	(26.5)	7.5	Hex.19	Hex.19
200-110SN	ø11 x ø16	127	(62)	(26.5)	10	Hex.23	Hex.24

Socket SNG type (For urethane hose with hose guard nut connection)



Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	A	øD	øB	H(WAF)
200-50SNG *3	ø5 x ø8	105	(137.5)	90	(26.5)	4.5	Hex.19
200-65SNG	ø6.5 x ø10	107	(137.5)	90	(26.5)	5.3	Hex.19
200-85SNG	ø8.5 x ø12.5	116	(137.5)	90	(26.5)	7.5	Hex.19

Socket SNRG type (With ball bearing swivel mechanism)



Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	A	øD	øB	H(WAF)
65SNRG	ø6.5 x ø10	121	(140.3)	90	(26.5)	5.3	Hex.19
85SNRG	ø8.5 x ø12.5	139	(140.3)	90	(26.5)	7.5	Hex.21

The pictures of Hi Cupla for connection to braided hoses and PN type and SN type of Nut Cupla show steel bodies. *1: Brass: øD=25.4 *2: Stainless steel: øD=25.4 *3: Made-to-order item

Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.