



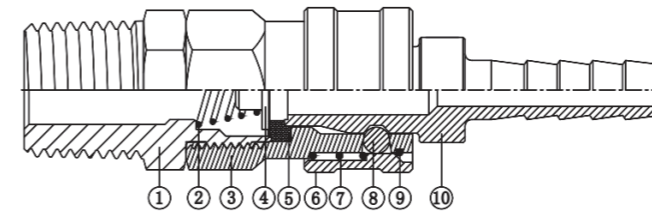


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FOR LOW PRESSURE, SINGLE VALVE TYPE



Item	Part Description
1	Adapter
2	Valve spring
3	Socket body
4	Valve
5	Packing
6	Sleeve
7	Sleeve spring
8	Ball
9	Stop ring
10	Plug

FEATURES

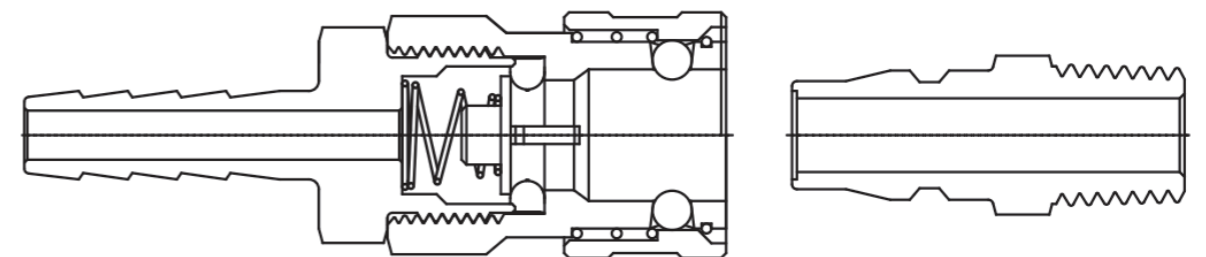
The shutoff valve built into the socket opens when the plug is inserted, and closes when the plug is removed. Therefore, it is not necessary to operate the main valve when inserting or removing the plug.

Both the socket and plug are available with male thread connection, female thread connection, or hose connection. Such connections can be combined as desired.

The NL-40 series are identical in size and interchangeable. The NL-20 series are also interchangeable with one another.

The main body is made of steel, brass or stainless steel.

A variety of models are available. You can select the best model to suit your specific operating conditions and applications.



MATERIAL CHARACTERISTICS

Size	NL-20				NL-40		
	1/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
Material of Socket / Plug Body	Steel (Chrome plated) CS / Brass C3604 /Stainless Steel 304						
Connection Method	SOCKET	Female thread (F) / Male thread (M) / Hose nipple (H)					
	PLUG						
Working Pressure (Max. Working Pressure)kg f / cm2	STEEL	15 (20)					
	STAINLESS STEEL	15 (20)					
0-ring and Valve Packing Material	NBR/ Viton						
Applicable Fluid	STEEL	Air / Oil					
	BARSS	Air / Water /Oil					
	STAINLESS STEEL	Air / Water /Oil					
Use	Pneumatic tool, Pneumatic piping, Pneumatic machinery, Water piping, etc.						

EXPLANATION

When disconnecting:

The sleeve of the socket is moved to the socket side and then stainless steel ball can move freely in the outer circumferential direction. The plug is pushed out by the reaction force of the valve spring. As a result, the valve closes automatically to stop fluid from flowing.

When connecting:

The plug is inserted while the sleeve remains on the socket side, and then valve opens and fluid flows. The sleeve returns to its former position by the force of the spring and the stainless steel ball locks in place to ensure connection. The valve packing completely prevents fluid leakage.

Remark

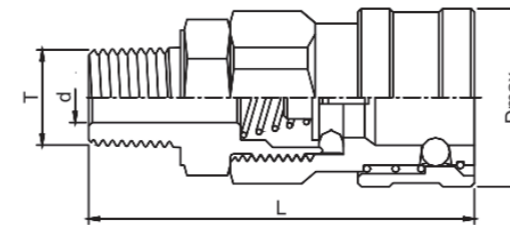
Fluid must flow from the socket to the plug because of the single valve design.

When connecting this coupling to vibration tools or machinery, installing a 30cm rubber hose between the tool and the coupling.

ORDERING INFORMATION

AS4-	21	PF-	N
CLASSIFICATION AND MATERIAL	THREAD SIZE	HOSE SIZE	PRODUCT NAME
AS4:SS304QUICK COUPLING	21 : 1/8"	21 :1/4"	SM:SOCKET - MALE THREAD R:BSPT THREAD
ABR:BRASSQUICK COUPLING	22 : 1/4"	22 :5/16"	SF:SOCKET - FEMALE THREAD N:NPTTHREAD
AFE:STEELQUICK COUPLING	23 : 3/8"	23 :3/8"	SH:SOCKET - HOSE NIPPLE
	24 : 1/2"	24 :1/2"	PM:PLUG - MALE THREAD
	44 : 1/2"	44 :1/2"	PF:PLUG - FEMALE THREAD
	46 : 3/4"	46 :3/4"	PH:PLUG - HOSE NIPPLE
	48 : 1"	48 :1"	

SOCKET (S)



Model SM

Socket-Male Thread

Part No.	Male Thread Size T(pt)	Dimensions (mm)		
		L	Damx.	d
21SM	1/8"	51.5	Φ25	Φ5
22SM	1/4"	54.5	Φ25	Φ7
23SM	3/8"	55.5	Φ25	Φ9
24SM	1/2"	58.5	Φ25	Φ9
44SM	1/2"	65.0	Φ35	Φ12
46SM	3/4"	67.0	Φ35	Φ18
48SM	1"	72.0	Φ35	Φ18

THE SLEEVES OF SOCKETS IN STEEL ARE WITH KNURLING. THE O.D. SIZE FOR NL-20 SERIES SLEEVE IS Φ25.4 AND NL-40 SERIES SLEEVE IS Φ35.

Model SF

Socket-Female Thread

Part No.	Female Thread Size T(pt)	Dimensions (mm)		
		L	Damx.	d
21SF	1/8"	44.5	Φ25	Φ5
22SF	1/4"	50.0	Φ25	Φ7
23SF	3/8"	51.0	Φ25	Φ9
24SF	1/2"	54.5	Φ25	Φ9
44SF	1/2"	60.0	Φ35	Φ15
46SF	3/4"	60.0	Φ35	Φ15
48SF	1"	68.0	Φ35	Φ15

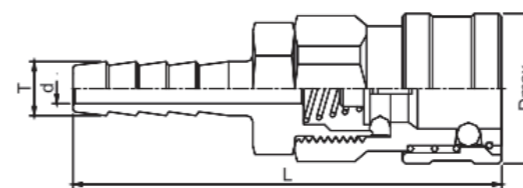
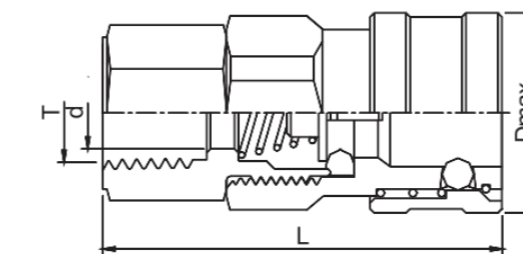
THE SLEEVES OF SOCKETS IN STEEL ARE WITH KNURLING. THE O.D. SIZE FOR NL-20 SERIES SLEEVE IS Φ25.4 AND NL-40 SERIES SLEEVE IS Φ35.

Model SH

Socket-Hose Nipple

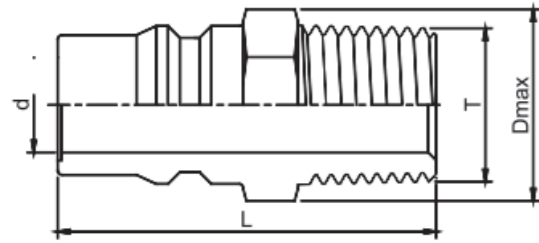
Part No.	Hose Size	Dimensions (mm)		
		L	Damx.	d
21SH	1/8"	70.5	Φ25	Φ4
22SH	1/4"	71.5	Φ25	Φ5
23SH	3/8"	75.5	Φ25	Φ7.5
24SH	1/2"	75.5	Φ25	Φ9
44SH	1/2"	82.0	Φ35	Φ9
46SH	3/4"	88.0	Φ35	Φ15
48SH	1"	94.0	Φ35	Φ17

THE SLEEVES OF SOCKETS IN STEEL ARE WITH KNURLING. THE O.D. SIZE FOR NL-20 SERIES SLEEVE IS Φ25.4 AND NL-40 SERIES SLEEVE IS Φ35.



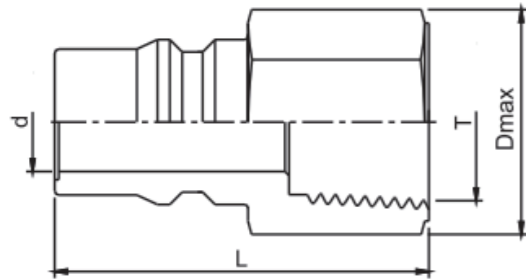
PLUG (P)

Model PM
Plug-Male Thread



Part No.	Male Thread Size T(pt)	Dimensions (mm)		
		L	Damx.	d
21PM	1/8"	36.5	H14	Φ7.5
22PM	1/4"	40.0	H14	Φ7.5
23PM	3/8"	41.5	H17	Φ7.5
24PM	1/2"	44.5	H21	Φ7.5
44PM	1/2"	48.0	H21	Φ12
46PM	3/4"	51.5	H27	Φ12
48PM	1"	55.5	H35	Φ12

Model PF
Plug-Female Thread



Part No.	Female Thread Size T(pt)	Dimensions (mm)		
		L	Damx.	d
21PF	1/8"	33.0	H14	Φ7.5
22PF	1/4"	36.0	H17	Φ7.5
23PF	3/8"	37.0	H19	Φ7.5
24PF	1/2"	40.0	H24	Φ7.5
44PF	1/2"	45.5	H24	Φ12
46PF	3/4"	46.0	H30	Φ12
48PF	1"	51.5	H38	Φ12

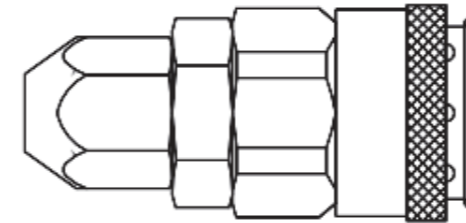
Model PH
Plug-Hose Nipple



Part No.	Hose Size	Dimensions (mm)		
		L	Damx.	d
21PH	1/8"	56.5	Φ16	Φ7.5
22PH	1/4"	57.5	Φ16	Φ7.5
23PH	3/8"	61.5	Φ16	Φ7.5
24PH	1/2"	61.5	Φ18	Φ7.5
44PH	1/2"	65.0	Φ24	Φ9.0
46PH	3/4"	71.0	Φ24	Φ12
48PH	1"	79.5	Φ30	Φ12

ONE-TOUCH QUICK COUPLING (FOR PLUGS, REFER TO NL-20 SERIES)

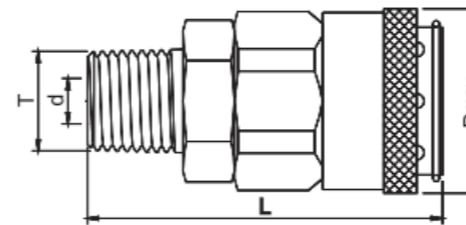
SOCKET(S)



Model YSA(B)
Socket-Nut

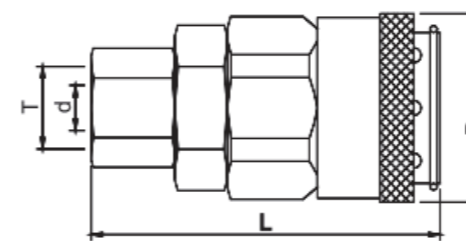
Part No.	Socket Size	
	I.D.	O.D
21YSA	Φ5.0	Φ8.0
22YSA	Φ6.5	Φ9.5
22YSB	Φ6.5	Φ10.0
23YSA	Φ8.0	Φ12.0
23YSB	Φ9.0	Φ12.7

Model YSM
Socket-Male Thread



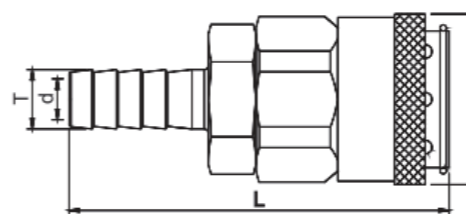
Part No.	Male Thread Size T(pt)	Dimensions (mm)		
		L	Damx.	d
21YSM	1/8"	54.5	Φ25	Φ4.0
22YSM	1/4"	55.5	Φ25	Φ7.5
23YSM	3/8"	57.5	Φ25	Φ7.5
24YSM	1/2"	59.5	Φ25	Φ9.0

Model YSF
Socket-Female Thread



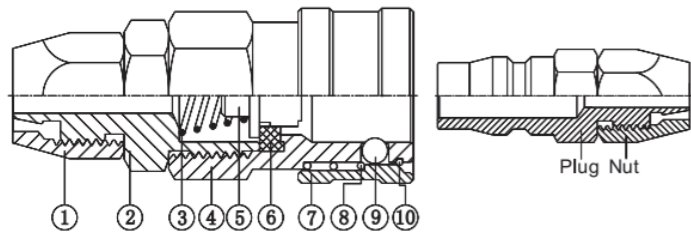
Part No.	Female Thread Size T(pt)	Dimensions (mm)		
		L	Damx.	d
21YSF	1/8"	52.5	Φ25	Φ7.5
22YSF	1/4"	52.5	Φ25	Φ7.5
23YSF	3/8"	54.5	Φ25	Φ7.5
24YSF	1/2"	54.5	Φ25	Φ9.0

Model YSH
Socket-Hose Nipple



Part No.	Hose Size	Dimensions (mm)		
		L	Damx.	d
21YSH	1/4"	72.5	Φ25	Φ4.0
22YSH	5/16"	72.5	Φ25	Φ5.0
23YSH	3/8"	76.5	Φ25	Φ7.5
24YSH	1/2"	78.5	H26/30	Φ9.0

NUT COUPLING



Item	Part Description
1	Nut
2	Adapter
3	Valve spring
4	Socket body
5	Valve
6	Valve packing
7	Sleeve
8	Sleeve spring
9	Ball
10	Stop ring

ORDERING INFORMATION

AFE-	21	SA
CLASSIFICATION AND MATERIAL	HOSE SIZE (ID.*OD.) (mm)	CONNECTION TYPE
AFE: STEELQUICK COUPLING	20: 4*6	SA: SOCKET - NUT
	22: 6.5*9.5	SB: SOCKET - NUT
	22: 6.5*10	PA : PLUG - NUT
	23: 8*12	PB: PLUG - NUT
	23: 9.5*12.7	
	20: 4*6	

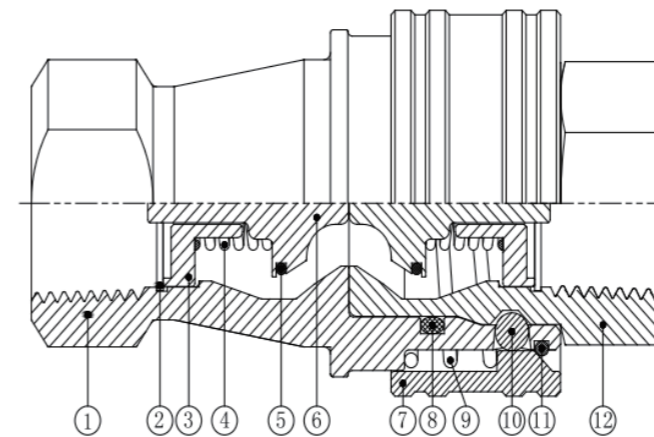
NOTE: Nut coupling 21 23 sockets in steel are available with one touch type. For ordering one touch type, add a prefix Y to the part number of the product name of the selected socket.

Example: AFE 23SA → AFE 23YSA

SPECIFICATIONS

Part No.		Hose Size (mm)	
Socket (S)	Plug (P)	I.D.	O.D.
20SA	20PA	Φ4.0	Φ6.0
21SA	21PA	Φ5.0	Φ8.0
22SA	22PA	Φ6.5	Φ9.5
22SB	22PB	Φ6.5	Φ10
23SA	23PA	Φ8.0	Φ12
23SB	23PB	Φ9.5	Φ12.7

FOR MIDDLE & LOW PRESSURE, TWIN VALVE TYPE



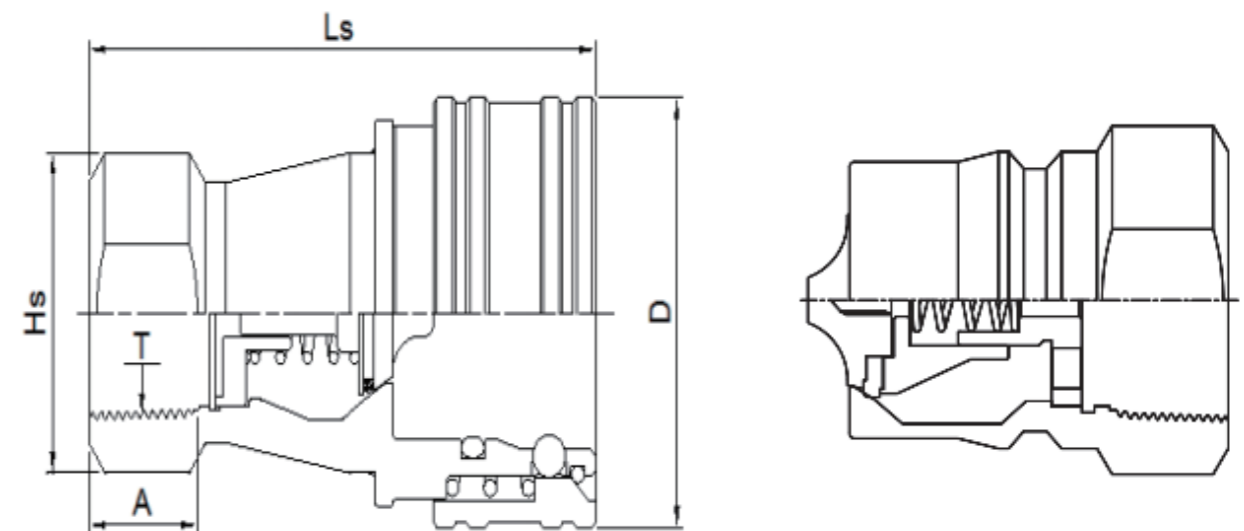
Item	Part Description
1	Socket body
2	Snap ring
3	Valve holder
4	Valve spring
5	Valve packing
6	valve
7	Sleeve
8	O-ring
9	Sleeve spring
10	Ball
11	Snap
12	Plug

FEATURES

Both the socket and plug of this twin-valves coupling form a shut off valve. The moment the socket and plug are disconnected, both the socket and plug sides are completely sealed.

Because the coupling has been made with great precision by fully utilizing the newest machining technology, a superior sealing performance is ensured even as the socket and plug are connected or disconnected.

The passage opens while the socket and plug are connected and closes while they are disconnected.



MATERIAL CHARACTERISTICS

Size	1/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Material of Socket / Plug Body	Brass C3604 / Stainless Steel 304,316/316L									
Connection Method	SOCKET	Female Thread (F)								
	PLUG									
	BARSS	50 (75)	30 (45)	20 (30)	15 (23)					
	STAINLESS STEEL	210 (235)	180 (200)	130 (145)	100 (110)					
O-ring and Valve Packing Material	NBR/Viton/EPDM/FFKM									
Applicable Fluid	BARSS	Gasoline / Heavy Oil / Kerosene / Water / Steam								
	STAINLESS STEEL	Acidic fluid / Alkaline fluid / Brine								
Use	Water piping, Sea-water piping, Oxygen piping, Acetylene piping, Air piping, Chemicals, Chemical plant, High pressure gas piping									

EXPLANATION

When disconnecting:

The sleeve of the socket is moved to the socket side, and then the stainless steel ball can move freely in the outer circumferential direction. The plug is disconnected from the socket by the reaction forces of the socket and plug valve springs. The moment plug is disconnected, the valves on both socket and plug sides shut off to stop the fluid from flowing.

When connecting:

The plug is inserted while the sleeve remains on the socket side, and then the sleeve returns to its former position by the force of the sleeve spring and the stainless steel ball locks in place to ensure connection. At this time, the valves on the socket and the plug side push against each other to open the passage and allow fluid to flow. The O-ring completely prevents fluid leakage.

Remark

The chemical resistance depending on the O-ring and valve packing material. Select the material that is best for the fluid.

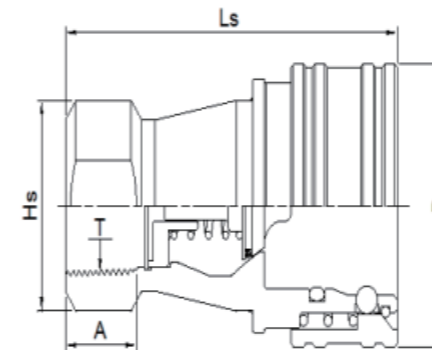
Sockets can be connected with plugs only when their nominal diameters are the same.

If the connection side is equipped with a hose nipple or a female thread, use a commercially available joint.

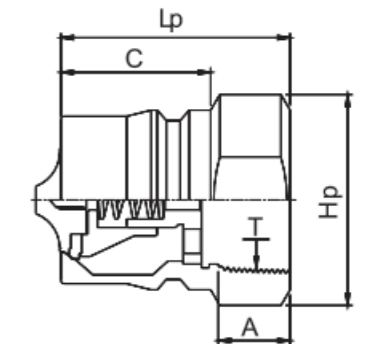
ORDERING INFORMATION

AS4-	KSS	01	N	(V)
CLASSIFICATION AND MATERIAL	PRODUCT NAME	THREAD SIZE	THREAD TYPE	PACKING MATERIAL
AS6:SS316/316L QUICK COUPLING	KSP:KS PLUG	01 : 1/8"	R:BSPT THREAD	V :VITON
AS4:SS304 QUICK COUPLING	KSS:KS SOCKET	02 : 1/4"	N:NPTTHREAD	N : NBR
ABR:BRASS QUICK COUPLING		03 : 3/8"		EP:EPDM
		04 : 1/2"		
		05 : 5/8"		
		06 : 3/4"		
		08 : 1"		
		12 : 1-1/4"		
		14 : 1-1/2"		
		16 : 2"		

SOCKET (S)



PLUG (P)



Female Thread Size T(PT)	Socket					Plug				
	Part No.	Dimensions (mm)				Part No.	Dimensions (mm)			
		Ls	D	A	Hs		Lp	C	A	Hp
1/8"	KSS01	48	24.0	11	Face14*R18	KSP01	29	19.0	11	H14
1/4"	KSS02	58	27.5	13	Face19*R22	KSP02	36	22.5	13	H17
3/8"	KSS03	65	34.5	13	Face22*R25	KSP03	40	25.0	13	H21
1/2"	KSS04	72	44.0	15	Face29*R31.5	KSP04	44	28.0	15	H27
3/4"	KSS06	90	54.5	17	Face35*R39	KSP06	54	35.5	17	H35
1"	KSS08	102	64.0	20	Face41*R48	KSP08	62	40.0	20	H41
1-1/4"	KSS12	112	77.5	24	Face54*R59	KSP12	70	45.0	24	Face54*R59.5
1-1/2"	KSS14	124	88.0	24	Face63*R69	KSP14	75	49.0	24	Face63*R69
2"	KSS16	132	100	27	Face70*R80	KSP16	84	50.5	27	Face70*R79.5