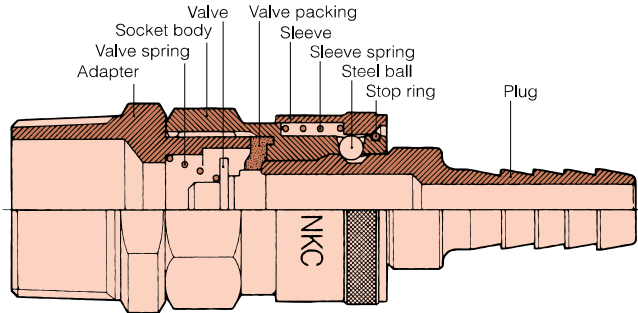


# NL Series

For low pressure, wide applications  
Single valve type



## Features

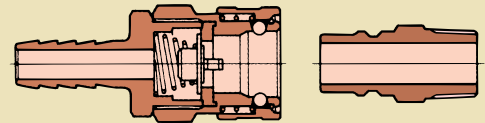
- The shut-off valve built into the socket opens when the plug is inserted and closes when the plug is removed. Therefore, it is not necessary to operate the main valve when inserting or removing the plug.
- Both the socket and plug are available with male screw connection, female screw connection, or hose connection. Such connections can be combined as desired.
- The fitting sections of models NL-21 to NL-24 are identical in size and interchangeable. Those of models NL-44 to NL-48 are also interchangeable with one another.
- The main body is made of steel, brass or stainless steel. When made of steel, the main body is hardened to ensure high durability and a high resistance to abrasion.
- A variety of models are available. You can select the best model to suit your specific operating conditions and applications. For example, various pipe and hose connections are available for oil pressure and pneumatic machinery.

## Specification

Model	NL-21	NL-22	NL-23	NL-24	NL-44	NL-46	NL-48
Nominal diameter	1/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
Material of socket/plug body	Steel SC(Chrome plated) / Brass C3604(BsBM) / Stainless steel SUS304						
Connection method	Socket	Female thread(F) / Male thread(M) / Hose nipple(H) / Urethane hose (B)					
	Plug						
Working pressure MPa (Max.working pressure)	Steel	1.5 (2.0)					
	Brass	1.0 (1.5)					
	Stainless steel	1.5 (2.0)					
Valve packing material: Working temperature range	Standard	Nitrile rubber(NBR) : -20°C~+80°C					
	Optional	Fluororubber(FKM) : -20°C~+180°C					
Applicable fluid	Steel	Air					
	Brass	Air / Water					
	Stainless steel	Air / Water					
Use	Pneumatic tool, pneumatic piping, pneumatic machinery, water piping, etc.						

## When disconnecting

When the sleeve of the socket is moved to the socket side, the 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.



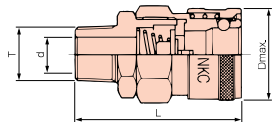
## When connecting

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

## NL Series Socket (S)

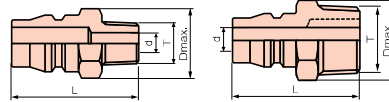
## NL Series Plug (P)

### Model SM (Male thread)



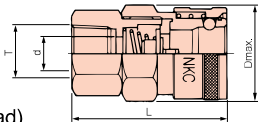
Model	Thread size T (R)	Dimensions(mm)			Mass(g)		
		L	Dmax.	d (φ)	Steel	Brass	Stainless steel
NL-22SM	1/4"	55.5	φ26	7	95	104	95
NL-23SM	3/8"	55.5	φ26	8	100	109	100
NL-24SM	1/2"	59.5	φ26	9	120	132	123
NL-44SM	1/2"	64	Hex. 32/37	13	220	240	218
NL-46SM	3/4"	65	Hex. 32/37	16	240	255	237
NL-48SM	1"	67	Hex. 35/40.4	16	250	270	245

### Model PM (Male thread)



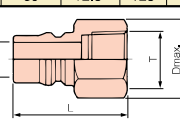
Model	Thread size T (R)	Dimensions(mm)			Mass(g)		
		L	Dmax. (Hex)	d (φ)	Steel	Brass	Stainless steel
NL-21PM	1/8"	38	14	5	23	25	24
NL-22PM	1/4"	40	14	7.5	25	27	26
NL-23PM	3/8"	40	17	7.5	40	45	41
NL-24PM	1/2"	46	21	7.5	65	70	66
NL-44PM	1/2"	47.5	21	12.5	70	76	70
NL-46PM	3/4"	51	27	12.5	115	123	117
NL-48PM	1"	54	35	12.5	125	133	128

### Model SF (Female thread)



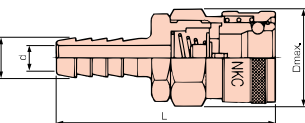
Model	Thread size T (Rc)	Dimensions(mm)			Mass(g)		
		L	Dmax.	d (φ)	Steel	Brass	Stainless steel
NL-22SF	1/4"	49.5	φ26	9	92	101	94
NL-23SF	3/8"	50.5	φ26	9	94	103	97
NL-24SF	1/2"	52.5	Hex. 29/33.5	9	132	146	136
NL-44SF	1/2"	59	Hex. 32/37	20	225	232	225
NL-46SF	3/4"	62	Hex. 35/40.4	20	235	250	230
NL-48SF	1"	65	Hex. 41/47.3	20	260	286	263

### Model PF·PFF (Female thread)



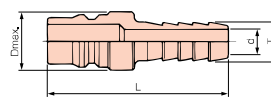
Model	Thread size T	Dimensions(mm)			Mass(g)		
		L	Dmax. (Hex)	d (φ)	Steel	Brass	Stainless steel
NL-22PFF	1/4"G	32	17	7.5	23	—	—
NL-22PF	1/4"Rc	36	17	7.5	30	32	30
NL-23PF	3/8"Rc	37	21	7.5	45	48	46
NL-24PF	1/2"Rc	38	29	7.5	65	70	65
NL-44PF	1/2"Rc	41.5	29	12.5	70	77	71
NL-46PF	3/4"Rc	45	35	12.5	106	117	108
NL-48PF	1"Rc	54	41	12.5	120	128	118

### Model SH (Hose nipple)



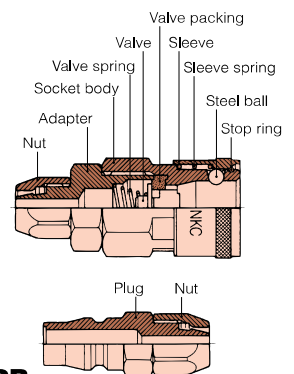
Model	T	Dimensions(mm)			Mass(g)		
		L	Dmax.	d (φ)	Steel	Brass	Stainless steel
NL-22SH	9	72.5	φ26	5	95	104	98
NL-23SH	11.3	76.5	φ26	7.5	100	108	99
NL-24SH	15	78.5	φ26	9	110	117	112
NL-44SH	15	83	Hex. 32/37	9	220	240	218
NL-46SH	21	92	Hex. 32/37	13	240	262	235
NL-48SH	27	102	Hex. 32/37	19	270	296	268

### Model PH (Hose nipple)



Model	T	Dimensions(mm)			Mass(g)		
		L	Dmax. (φ)	d (φ)	Steel	Brass	Stainless steel
NL-22PH	9	57	16	5	27	29	26
NL-23PH	11.3	61	16	7.5	35	38	31
NL-24PH	15	63	18	7.5	50	55	48
NL-44PH	15	67.5	22	9	75	80	75
NL-46PH	21	76.5	30	13	122	132	126
NL-48PH	27	86.5	30	18.5	145	165	148

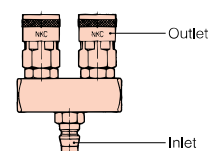
## NL Nut coupling



### Model SB·PB (Urethane hose)

Model	Hose size		Model	Hose size	
	Inner dia. (mm)	Outer dia. (mm)		Inner dia. (mm)	Outer dia. (mm)
NL-22SB	φ 6.5	φ 10	NL-22PB	φ 6.5	φ 10
NL-23SB	φ 8.5	φ 12.5	NL-23PB	φ 8.5	φ 12.5

## NL Line connector



## Specification

Model	Connector couplings		Dimensions(mm)		Mass(g)
	Inlet	Outlet	Connector body	Overall length	
NL-P-2	NL-22PM	NL-22SM×2	22×22×69	69	260