

Quick Coupling

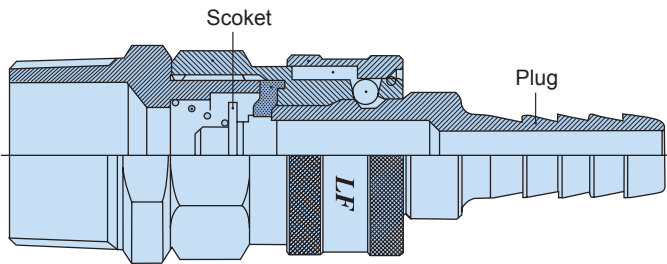
Quick Coupling



NL Quick Coupling	TS Quick Coupling	KS Quick Coupling	HP Quick Coupling
110	112	114	116

NL Quick Coupling

NL Series For low pressure, wide applications, single valve type



Feature:

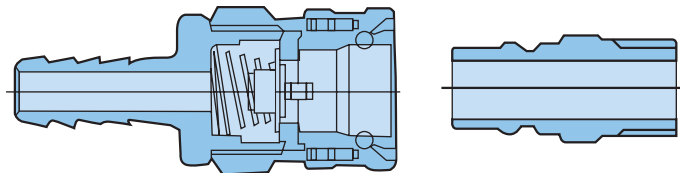
- The shutoff valve built into the socket opens when the plug is inserted and closes when the plug is removed. Therefore, it is not necessary to operate the main valve when inserting or removing the plug.
- Both the socket and plug are available with male screw connection, female screw connection, or hose connection. Such connections can be combined as desired.
- The fitting sections of models NL21 to NL24 are identical in size and interchangeable. Those of models NL44 to NL48 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.

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/Brass C3604(BsBM)/Stainless steel						
Connection method	Socket	Female screw(F)/ Male screw(M) / Hose nipple(H)					
	Plug						
Working pressure kgf/cm ²	Steel	15(20)					
	Brass	10(15)					
	Stainless Steel	15(20)					
Valve packing material	Standard	Nitrile rubber(NBR) -20°C ~+80°C					
Working temperature range	Special	VITON(FPT) -20°C ~+180°C					
Applicable fluid	Steel	Air / Oil					
	Brass	Air / Water / Oil					
	Stainless Steel	Air / Water / Oil					
Use	Pneumatic tool, pneumatic piping, pneumatic machinery, water piping, etc.						

Explanation:

When disconnection

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.

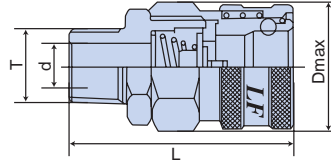
Notes: Fluid must flow from the socket to the plug because of the single valve design.

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

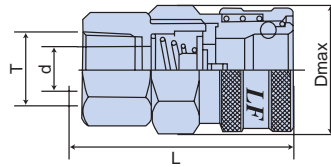
Ordering Type and Model Dimensions:

NL SOCKET (S)

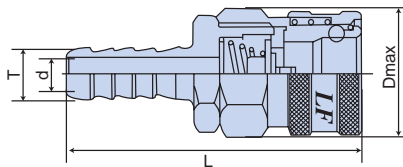
SM Male Socket



SF Female Socket

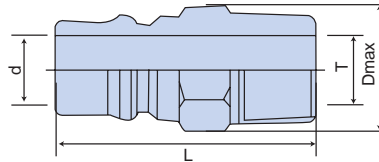


SH Hose Socket

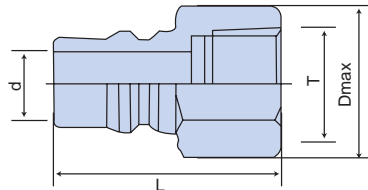


NL PLUG (P)

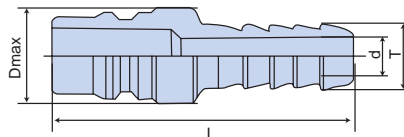
PM Male Plug



PF Female Plug



PH Hose Plug



Type	Screw size T	Dimensions(mm)			Weight(g)		
		Length L	Dmax	Dmin d	Steel	Brass	Stainless Steel
SM-21	PT1/8"	54.5	Ø25	Ø4	90	98	92
SM-22	PT1/4"	55.5	Ø25	Ø7.5	95	104	95
SM-23	PT3/8"	57.5	Ø25	Ø7.5	100	109	100
SM-24	PT1/2"	59.5	Ø25	Ø9	110	117	111
SM-44	PT1/2"	64	Hex 32/37	Ø13	220	240	218
SM-46	PT3/4"	67	Hex 32/37	Ø17	240	255	237
SM-48	PT1"	68	Hex 35/40.4	Ø17	250	270	245

Type	Screw size T	Dimensions(mm)			Weight(g)		
		Length L	Dmax	Dmin d	Steel	Brass	Stainless Steel
SF-21	PT1/8"	52.5	Ø25	Ø7.5	105	110	108
SF-22	PT1/4"	52.5	Ø25	Ø7.5	104	110	107
SF-23	PT3/8"	54.5	Ø25	Ø7.5	103	111	108
SF-24	PT1/2"	54.5	Ø25	Ø9	122	131	123
SF-44	PT1/2"	60	Hex 32/37	Ø13	225	232	225
SF-46	PT3/4"	61	Hex 32/37	Ø17	235	250	230
SF-48	PT1"	63	Hex 35/40.4	Ø17	260	286	263

Type	Hose size T	Dimensions(mm)			Weight(g)		
		Length L	Dmax	Dmin d	Steel	Brass	Stainless Steel
SH-21	1/4"	72.5	Ø25	Ø4	93	102	95
SH-22	5/16"	72.5	Ø25	Ø5	95	104	98
SH-23	3/8"	76.5	Ø25	Ø7.5	100	108	99
SH-24	1/2"	78.5	Hex 26/30	Ø9	110	117	112
SH-44	1/2"	83	Hex 32/37	Ø9	220	240	218
SH-46	3/4"	83	Hex 32/37	Ø12.5	240	262	235
SH-48	1"	93	Hex 32/37	Ø17	270	296	268

Type	Screw size T	Dimensions(mm)			Weight(g)		
		Length L	Dmax	Dmin d	Steel	Brass	Stainless Steel
PM-21	PT1/8"	39	Hex 14/16.2	Ø4	23	25	24
PM-22	PT1/4"	41	Hex 14/16.2	Ø7.5	25	27	26
PM-23	PT3/8"	43	Hex 17/19.6	Ø7.5	40	45	41
PM-24	PT1/2"	46	Hex 21/24.2	Ø7.5	65	70	66
PM-44	PT1/2"	50	Hex 21/24.2	Ø12.5	70	76	70
PM-46	PT3/4"	54	Hex 27/31.2	Ø12.5	115	123	117
PM-48	PT1"	53	Hex 35/40.2	Ø12.5	125	133	128

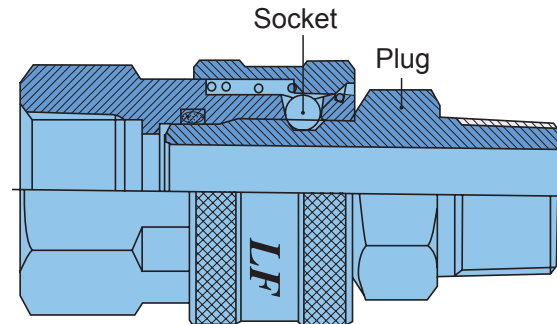
Type	Screw size T	Dimensions(mm)			Weight(g)		
		Length L	Dmax	Dmin d	Steel	Brass	Stainless Steel
PF-21	PT1/8"	37	Hex 14/16.2	Ø7.5	24	26	26
PF-22	PT1/4"	38	Hex 14/16.2	Ø7.5	30	32	30
PF-23	PT3/8"	41	Hex 17/19.6	Ø7.5	45	48	46
PF-24	PT1/2"	43	Hex 26-30	Ø7.5	65	70	65
PF-44	PT1/2"	43	Hex 27/31.2	Ø12.5	70	77	71
PF-46	PT3/4"	47	Hex 32/37	Ø12.5	106	114	108
PF-48	PT1"	46	Hex 38/43.9	Ø12.5	120	128	118

Type	Hose size T	Dimensions(mm)			Weight(g)		
		Length L	Dmax	Dmin d	Steel	Brass	Stainless Steel
PH-21	1/4"	58	Ø16	Ø4	25	27	25
PH-22	5/16"	58	Ø16	Ø5	27	29	26
PH-23	3/8"	62	Ø16	Ø7.5	35	38	31
PH-24	1/2"	64	Ø18	Ø7.5	50	55	48
PH-44	1/2"	69	Ø22	Ø9	75	80	75
PH-46	3/4"	74	Ø23	Ø12.5	122	132	126
PH-48	1"	78	Ø30	Ø17	145	165	148

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TS Quick Coupling

For middle & low pressure, wide applications Valveless type.



Features:

- This valveless model has no valve mechanism in the socket and none in the plug.
- The internal construction features a low flow resistance to reduce pressure loss. This series is thus well-suited to high-viscosity fluids, steam and pulverulent bodies.
- Both the socket and plug are available with male screw connection, female screw connection and hose connection. Such connections can be combined as desired.
- Numerous models are available varying in nominal diameter, body material, O-ring material and connection method. You can select precisely the best model for your application and operating conditions.

Notes:

Note that sockets can be connected to plugs only when their nominal diameters are the same.
 Sockets and plugs with large nominal diameters have a low resistance to pressure. Bear this in mind when using large sockets and plugs.
 Please specify the O-ring material in accordance with the type of fluid to be piped.

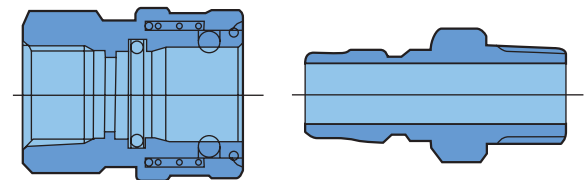
Explanation:

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 and the plug can be removed. Since both the socket and plug have no valve mechanism, the fluid flows outward.

When connecting

If the plug is inserted while the sleeve remains on the socket side, the sleeve is returned to its former position by the force of the sleeve spring. The steel ball locks in place to ensure connection. The O-ring completely prevents fluid leakage.

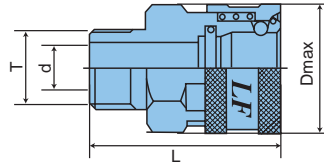


Model	1-TS	2-TS	3-TS	4-TS	6-TS	8-TS	10-TS	12-TS	16-TS
Nominal diameter	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Material of socket/plug body	Steel SC/Brass C3604(BsBM)/Stainless steel								
Connection method	Socket	Female screw(F)/ Male screw(M) / Hose nipple(H)							
	Plug								
Working pressure kgf/cm ²	Brass	50(75)		30(45)		20(30)		16(23)	
	Stainless Steel	75(100)		45(65)		30(40)		20(30)	
	Steel	75(100)		45(65)		30(40)		20(30)	
Valve packing material	Standard	VITON (FPM) : -20°C~+180°C							
Working temperature range	Special	NITRILE RUBBER(NBR) : -20°C~+80°C							
Applicable fluid	Brass	Petrol/Heavy oil/Kerosene/Water/Steam							
	Stainless Steel	Acid liquid/Alkalinity liquid/Brine							
	Steel	Hydraulic oil							
Use	Hydraulic press/Hydraulic tube/Water pipe/Steam pipe/Brine pipelines/Chemical engineering machinery/High-pressure gas pipelines								

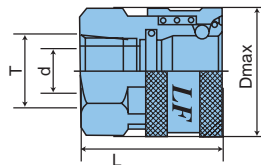
Ordering Type and Model Dimensions:

TS SOCKET (S)

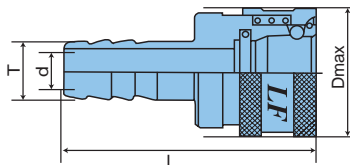
SM Male Socket



SF Female Socket

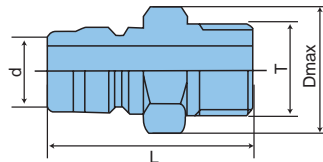


SH Hose Socket

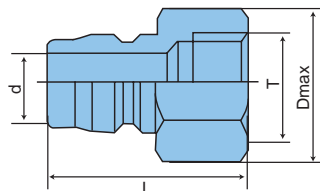


TS PLUG (P)

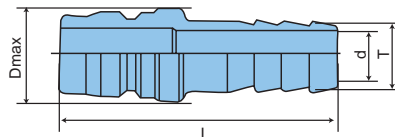
PM Male Plug



PF Female Plug



PH Hose Plug



Type	Screw size T	Dimensions(mm)			Weight(g)	
		Length L	Dmax	Dmin d	Brass	Stainless Steel
1-TS	PT1/8"	30	Ø18	Ø5	28	27
2-TS	PT1/4"	42	Ø24	Ø7	70	65
3-TS	PT3/8"	45	Ø28	Ø10	100	93
4-TS	PT1/2"	54	Ø35	Ø13	180	166
6-TS	PT3/4"	64	Ø45	Ø17	360	335
8-TS	PT1"	74	Ø57	Ø24	680	628
10-TS	PT1-1/4"	86	Ø69	Ø32	1030	960
12-TS	PT1-1/2"	93	Ø76	Ø38	1250	1180
16-TS	PT2"	105	Ø95	Ø48	2130	2020

Type	Screw size T	Dimensions(mm)			Weight(g)	
		Length L	Dmax	Dmin d	Brass	Stainless Steel
1-TS	PT1/8"	25	Ø18	Ø5	25	24
2-TS	PT1/4"	32	Ø24	Ø7	55	50
3-TS	PT3/8"	36	Ø28	Ø10	90	83
4-TS	PT1/2"	42	Ø35	Ø13	160	148
6-TS	PT3/4"	50	Ø45	Ø17	320	300
8-TS	PT1"	59	Ø57	Ø26	525	490
10-TS	PT1-1/4"	64	Ø69	Ø34	900	825
12-TS	PT1-1/2"	73	Ø76	Ø38	1050	970
16-TS	PT2"	95	Ø95	Ø50	1850	1660

Type	Hose size T	Dimensions(mm)			Weight(g)	
		Length L	Dmax	Dmin d	Brass	Stainless Steel
1-TS	1/4"	30	Ø18	Ø5	28	27
2-TS	5/16"	42	Ø24	Ø7	70	65
3-TS	3/8"	45	Ø28	Ø10	100	93
4-TS	1/2"	54	Ø35	Ø13	180	166
6-TS	3/4"	64	Ø45	Ø17	360	335
8-TS	1"	74	Ø57	Ø24	680	628
10-TS	1-1/4"	86	Ø69	Ø32	1030	960
12-TS	1-1/2"	93	Ø76	Ø38	1250	1180
16-TS	2"	105	Ø95	Ø48	2130	2020

Type	Screw size T	Dimensions(mm)			Weight(g)	
		Length L	Dmax	Dmin d	Brass	Stainless Steel
1-TS	PT1/8"	31	Hex 11/12.7	Ø5	25	24
2-TS	PT1/4"	38	Hex 17/19.6	Ø7	32	30
3-TS	PT3/8"	43	Hex 19/21.9	Ø10	45	42
4-TS	PT1/2"	52	Hex 23/26.6	Ø13	84	78
6-TS	PT3/4"	59	Hex 29/33.5	Ø17	150	138
8-TS	PT1"	74	Hex 38/43.9	Ø24	320	300
10-TS	PT1-1/4"	83	Ø55	Ø32	530	505
12-TS	PT1-1/2"	93	Ø65	Ø38	710	675
16-TS	PT2"	105	Ø80	Ø48	1430	1320

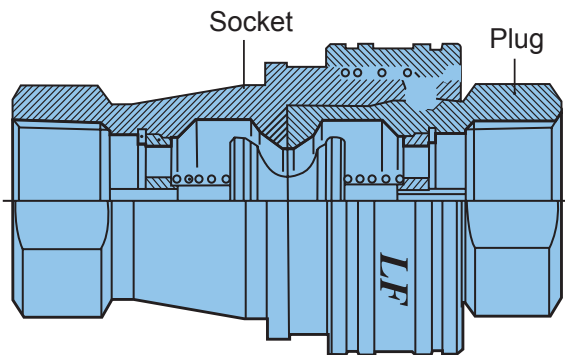
Type	Screw size T	Dimensions(mm)			Weight(g)	
		Length L	Dmax	Dmin d	Brass	Stainless Steel
1-TS	PT1/8"	25	Hex 14/16.2	Ø5	13	13
2-TS	PT1/4"	32	Hex 17/19.6	Ø7	17	16
3-TS	PT3/8"	38	Hex 21/24.2	Ø10	45	42
4-TS	PT1/2"	44	Hex 26/30	Ø13	85	78
6-TS	PT3/4"	50	Hex 35/40.4	Ø17	177	161
8-TS	PT1"	59	Hex 41/47.3	Ø26	265	240
10-TS	PT1-1/4"	64	Ø60	Ø32	610	580
12-TS	PT1-1/2"	75	Ø65	Ø38	750	635
16-TS	PT2"	81	Ø81	Ø50	1350	1180

Type	Hose size T	Dimensions(mm)			Weight(g)	
		Length L	Dmax	Dmin d	Brass	Stainless Steel
1-TS	1/4"	42	Ø12	Ø3	12	12
2-TS	5/16"	53	Ø14	Ø5	25	23
3-TS	3/8"	60	Ø18	Ø7	40	37
4-TS	1/2"	69	Ø22	Ø10	75	69
6-TS	3/4"	80	Ø28	Ø15	132	124
8-TS	1"	104	Ø40	Ø19	340	315
10-TS	1-1/4"	121	Ø50	Ø25	560	525
12-TS	1-1/2"	130	Ø55	Ø32	700	650
16-TS	2"	142	Ø70	Ø40	1450	1350

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KS Quick Coupling

KS For middle & low pressure, Twin valve type

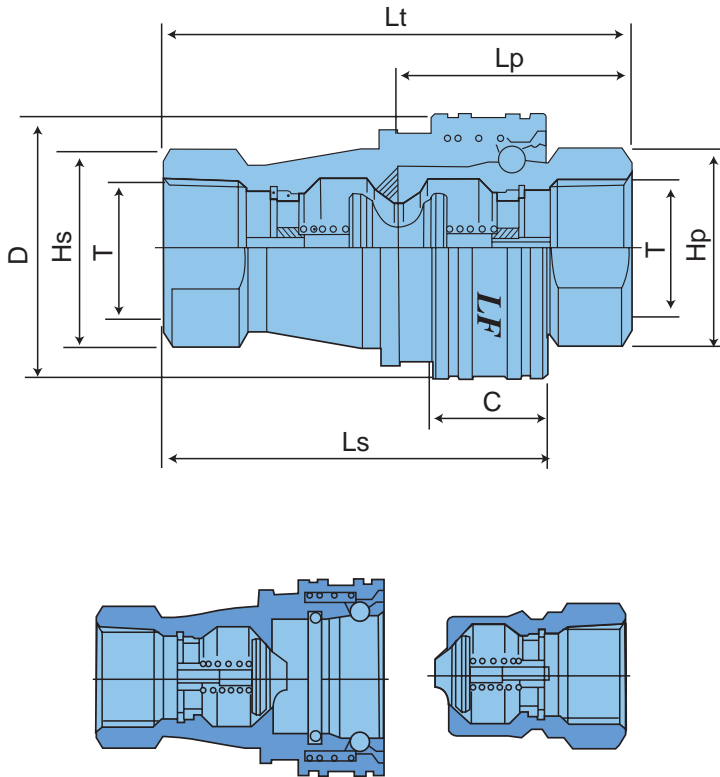


Features:

- Both the socket and plug of this twin-valve coupling incorporate a shutoff valve. The moment the socket and plug are disconnected, the socket and plug sides of the coupling 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 the moment the socket or plug is connected and closes the moment the socket or plug is disconnected. This virtually eliminates fluid loss and air entry.
- Numerous models are available varying in nominal diameter, body material, O-ring material and valve packing material. Select the model that is best suited to your application and operating conditions.

Model	KS-1	KS-2	KS-3	KS-4	KS-6	KS-8	KS-10	KS-12	KS-16	
Nominal diameter	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	
Material of socket/plug body	Steel SC/Brass C3604(BsBM)/Stainless steel									
Connection method	Female screw(F) / Socket(S) / Plug(P)									
Working pressure kgf/cm ²	Brass	50(75)			30(45)		20(30)		15(23)	
	Stainless Steel	75(100)			45(65)		30(45)		20(30)	
	Steel	75(100)			45(65)		30(45)		20(30)	
Valve packing material	Standard	VITON(FPM) -20°C~+180°C								
Working temperature range	Special	NITRILE RUBBER(NBR) -20°C~+80°C								
Applicable fluid	Brass	Petrol/Heavy oil/Kerosene/Water/Air								
	Stainless Steel	Acid liquid/Alkalinity liquid/Brine								
	Steel	Hydraulic oil								
Use	Oxygen tube/Acetylene tube/Steam pipe/Water pipe/Brine pipelines/Chemical engineering machinery/High-pressure gas pipelines									

Ordering Type and Model Dimensions:



Explanation:

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 disconnected from the socket by the reaction forces of the socket and plug valve springs. The socket and plug sides contact the mating seat sections to stop the fluid from flowing.

When connecting

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

Notes:

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

Note that sockets can be connected to plugs only when their nominal diameters are the same.

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

Type	Screw size T	Socket(s)						Plug(p)				Length After Assembling (MM)	Fluid Area Mini Mum Hole Dia Meter (CM ²)
		Dimensions(mm)				Weight(g)		Dimensions(mm)		Weight(g)			
		Ls	Hs	D	C	Brass	SS	Lp	Hp	Brass	SS		
KS-1	PT1/8"	48.9	Ø17	Ø23	17	90	73	30	Hex 15/16.2	20	18	60	0.15
KS-2	PT1/4"	57.4	Ø22	Ø28	17.8	150	130	35.4	Hex 17/19.6	38	33	71	0.2
KS-3	PT3/8"	65.2	Ø25	Ø35	20	220	195	40	Hex 21/24.2	65	55	80	0.5
KS-4	PT1/2"	72	Ø35	Ø44	25	470	435	44	Hex 29/33.5	135	125	89	1
KS-6	PT3/4"	88	Ø40	Ø54	31	775	710	52	Hex 35/40.4	230	210	105	1.9
KS-8	PT1"	102	Ø48	Ø65	32.5	1090	1000	62	Hex 41/47.3	380	315	125	2.9
KS-10	PT1-1/4"	115	Ø60	Ø79	34	1730	1600	70	Ø59	650	600	141	4.5
KS-12	PT1-1/2"	124	Ø70	Ø89	39	2550	2340	75	Ø69	965	890	151	7.7
KS-16	PT2"	132	Ø84	Ø109	39	3950	3660	80	Ø84	1630	1510	160	12.3

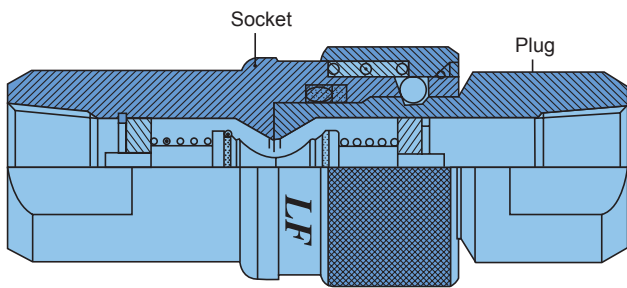
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HP High Pressure Quick Coupling

For high pressure Twin valve type

Features:

- Both the socket and plug of this twin valve coupling incorporate a shutoff valve. The moment the socket and plug are disconnected, the valves on the socket and plug sides contact the mating seat sections to completely seal the socket and plug sides.
- The body is made of chromium-molybdenum steel and hardened to ensure high durability and a high resistance to abrasion.
- This series has been designed for use under high pressure and is highly resistant to vibration and a high resistance to abrasion.
- Due to low pressure loss, this series is ideally suited for highly pressurized oil and gas pipes.



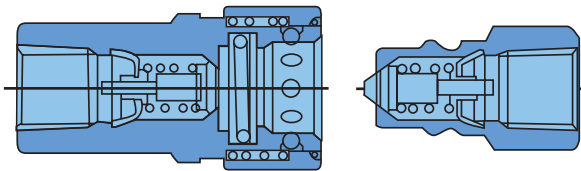
Explanation:

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 socket by the reaction forces of the socket and plug valve springs. The moment the plug is disconnected, the valves on the socket and plug sides contact the mating seat sections to stop the fluid from flowing.

When connecting

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

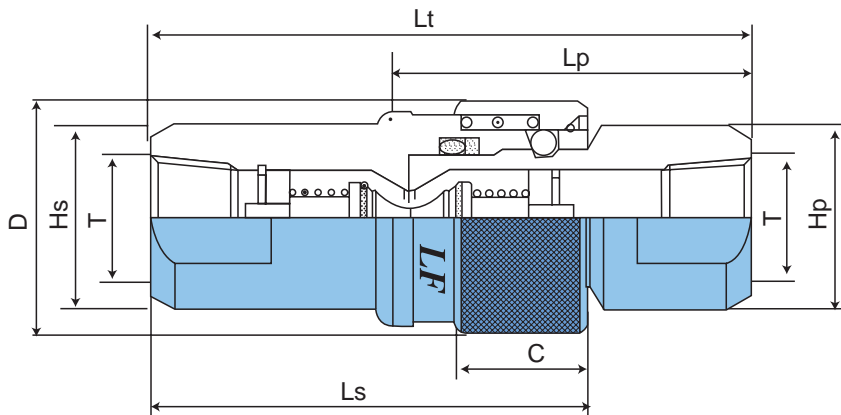


Notes:

- Note that sockets can be connected to plugs only when their nominal diameters are the same.
- Female connection, don't wring the male corresponding too tight.
- Don't let any impurity get into the seal fitting, or else it might occur leakage.

Model	2-HP	3-HP	4-HP	6-HP	8-HP	10-HP	12-HP	16-HP
Nominal diameter	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Material of socket/plug body	Chromized Steel(Galvanized Steel)							
Connection method	Female screw(F)/ Socket(S) / Plug(P)							
Working pressure kgf/cm ²			210 (315)				180 (270)	140 (210)
Valve packing material Working temperature range	NITRILE RUBBER (NBR) -20°C~+80°C							
Applicable fluid	Hydraulic Fluid / High Pressure Gas							
Use	Hydraumatic Machine / High Pressure Gas Hose							

Ordering Type and Model Dimensions:



Type	Screw size T	Socket(s)					Plug(p)			Length After Assembling (MM)
		Dimensions(mm)				Weight(g)	Dimensions(mm)		Weight(g)	
		Ls	Hs	D	C		Lp	Hp		
2-HP	PT1/4"	50	Ø22	Ø28	16	135	33	Hex 19/21.9	45	68
3-HP	PT3/8"	62	Ø25	Ø34	20	220	40	Hex 23/26.6	70	80
4-HP	PT1/2"	73	Ø35	Ø43	24	480	46	Hex 30/34.6	140	93
6-HP	PT3/4"	73	Ø35	Ø43	24	460	48	Ø35	145	100
8-HP	PT1"	93	Ø45	Ø59	27	1050	58	Ø44	330	120
10-HP	PT1-1/4"	138	Ø64	Ø89	36	1600	80	Ø64	900	162
12-HP	PT1-1/2"	138	Ø64	Ø89	36	1550	80	Ø64	700	162
16-HP	PT2"	198	Ø90	Ø123	40	3650	115	Ø100	1510	232

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. ONLY FOR REFERENCE SUBJECT TO CHANGE.