

Quick coupling sockets/plugs NPHS, shut-off on one side



FESTO

Technical data

Safety coupling

NPHS-D6-M/NPHS-S6



- Releasing sleeve made of metal
- Combination of coupling and hand slide valve
- Exhaust the air on the plug side without releasing the coupling
- Can be used as an on-off valve

-  - Flow rate
1750 ... 2100 l/min
-  - Nominal width
5.5 ... 10 mm



Safety coupling NPHS-D6-P/NPHS-S6

- Releasing sleeve made of plastic
- Exhaust the air on the plug side without releasing the coupling

-  - Flow rate
875 ... 2083 l/min
-  - Nominal width
5 ... 11 mm



Note

All types of quick coupling socket NPHS-D6 are compatible with all plugs NPHS-S6. In addition, the quick coupling sockets NPHS-D6-M and all quick

coupling plugs NPHS-S6 can be combined with quick coupling sockets/plugs KD4/KS4 made of brass. In contrast, the quick coupling sock-

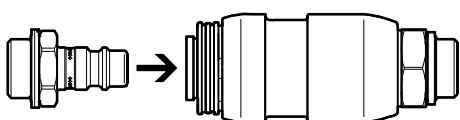
ets NPHS-D6-P may only be used with the hardened quick coupling plugs NPHS-S6. No safety function when combining

quick coupling socket KD4 with quick coupling plug NPHS-S6. In this combination, the plug is released directly in one step.

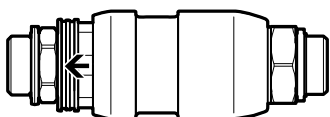
Mode of operation

Quick coupling socket NPHS-D6-M and quick coupling plug NPHS-S6

Coupling



To lock the coupling, push the plug into the socket. The plug automatically engages with an audible click when in a specific position.



When the plug is engaged, the releasing sleeve shifts one position in the direction of the plug. This releases the locking mechanism between the releasing sleeve and the sliding sleeve. The sliding sleeve can now be actuated.

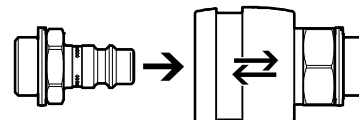
Pressurising



To pressurise, slide the sliding sleeve in the direction of the plug.

Quick coupling socket NPHS-D6-P and quick coupling plug NPHS-S6

Coupling



To lock the coupling, push the plug into the socket. The plug automatically engages with an audible click when in a specific position. In the

process, the releasing sleeve moves briefly backwards and then forwards again.

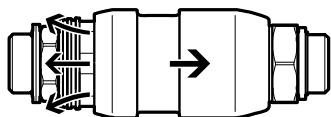
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Mode of operation

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Exhausting

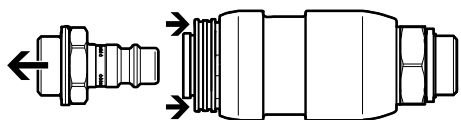


To exhaust, slide the sliding sleeve in the direction of the thread on the quick coupling socket. The air from the plug and the components connected to it can escape. The air on the coupling side is shut off. The releasing sleeve is now accessible.

Special features:

To repressurise the plug, the sliding sleeve must once more be slid in the direction of the plug. It is not necessary to release the plug from the socket completely before doing this. This safety coupling can thus be used as an on-off valve, for example.

Decoupling



Unlock the plug fully by pushing the releasing sleeve. The plug should only be removed after all the air has been exhausted. With the plug removed, the two sleeves cannot slide or be pushed.

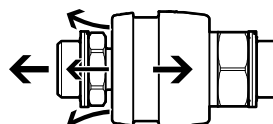


Note

Pressurise or exhaust the coupling to a maximum of 10 bar only. Hearing protection is recommended, especially at higher operating pressures.

Quick coupling socket NPHS-D6-P and quick coupling plug NPHS-S6

Exhausting

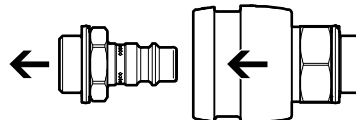


To exhaust, first slide the releasing sleeve in the direction of the thread on the quick coupling socket. This releases the pin locking mechanism of the coupling. The plug moves approx. 5 mm out of the coupling and is held in this position by the ball locking mechanism of the coupling. The air from the plug and the components connected to it can escape. The air on the coupling side is shut off.

Special features:

To repressurise the plug, it must once more be pushed into the socket. It is not necessary to release the plug from the socket completely before doing this.

Decoupling



Next release the plug from the ball locking mechanism by pulling the releasing sleeve. This releases the plug completely so that it can be removed from the socket. The plug should only be removed after all the air has been exhausted.

General technical data – Quick coupling socket NPHS-D6

Pneumatic connection 1	Male thread								Female thread			For plug-in nipple
	NPHS-D6-M				NPHS-D6-P				NPHS-D6-P			NPHS-D6-P
	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$		G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	I.D. 9 mm
Nominal width [mm]	8.2	10	10		5	7.8	10.2	11	–	–	–	7
Nominal tightening torque [Nm]	7 ±20%	15 ±20%	25 ±20%		3.5 ±10%	11 ±10%	12.5 ±20%	14 ±20%	–	–	–	–
Product weight [g]	173	179	200		94	95	98	113	124	114	122	95

General technical data – Quick coupling plug NPHS-S6

Pneumatic connection 1	Male thread				Female thread			For plug-in nipple
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	I.D. 9 mm
Nominal width [mm]	5.5	7.85	7.85	7.85	7.85	7.85	7.85	7
Nominal tightening torque [Nm]	3.5 ±10%	11 ±10%	12.5 ±20%	14 ±20%	–	–	–	–
Product weight [g]	19	20	27	50	28	29	49	17

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Technical data

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]				
Quick coupling socket/plug combination	Quick coupling socket NPHS-D6-M			
	Male thread			
	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	
Quick coupling plug NPHS-S6				
Male thread	G $\frac{1}{4}$	1833	2100	2100
	G $\frac{3}{8}$	1800	2050	2050
	G $\frac{1}{2}$	1750	2000	2000

1) Measured at $p_1 = 6$ bar and $\Delta p = 1$ bar

Standard nominal flow rate qnN ¹⁾ [l/min]									
Quick coupling socket/plug combination		Quick coupling socket NPHS-D6-P							
		Male thread				Female thread			For plug-in nipple
		G1/8	G1/4	G3/8	G1/2	G1/4	G3/8	G1/2	I.D. 9 mm
Quick coupling plug NPHS-S6									
Male thread	G1/8	875	1183	1216	1233	1183	1203	1238	1093
	G1/4	1038	1916	2033	2016	2033	2000	1983	1585
	G3/8	1038	1883	2033	1983	2033	1950	1950	1585
	G1/2	1002	1883	1966	1950	1966	1916	1916	1533
Female thread	G1/4	1002	1883	1950	1916	1800	1800	1008	1503
	G3/8	1050	1966	2083	2016	2050	2083	2050	1613
	G1/2	1038	1883	2000	1983	1933	2050	1950	1613
For plug-in nipple	I.D. 9 mm	966	1585	1640	1585	1585	1700	1640	1448

1) Measured at $p_1 = 6$ bar and $\Delta p = 1$ bar

Operating and environmental conditions			
	Quick coupling socket		Quick coupling plug
	NPHS-D6-M	NPHS-D6-P	NPHS-S6
Operating pressure for entire temperature range [bar]	-0.95 ... +20 ¹⁾		-0.95 ... +10 (-0.95 ... +20) ²⁾
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-]		
Note on operating/pilot medium	Lubricated operation possible		
Ambient temperature [°C]	-20 ... +80		-10 ... +60 (-20 ... +100) ²⁾
Corrosion resistance class CRC ³⁾	1		1
Noise level ⁴⁾ [dB(A)]	110 (at 6 bar)		-
	113 (at 10 bar)		-
	117 (at 16 bar)		-

1) Pressurise or exhaust the coupling to a maximum of 10 bar only. Hearing protection is recommended, especially at higher operating pressures. 20 bar is the maximum static operating pressure (without pulsation).

2) Using a suitable sealing ring (e.g. sealing ring OL), it is possible to achieve a static operating pressure (without pulsation) of up to 20 bar in a temperature range of -20°C to +100°C.

3) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

4) Measured at a distance of 1 m, 10 l volume via the coupling, at pressure open and exhausted.

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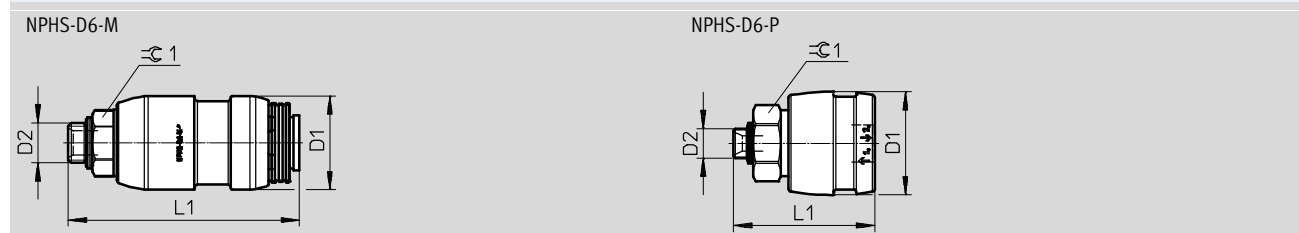
Technical data

Materials	Quick coupling socket		Quick coupling plug
	NPHS-D6-M	NPHS-D6-P	NPHS-S6
Housing	Nickel-plated brass	Nickel-plated brass	Hardened galvanised steel
Sliding sleeve	Clear anodised aluminium	–	–
Releasing sleeve	Nickel-plated brass	PP	–
Note on materials	RoHS compliant		

Dimensions – Quick coupling socket

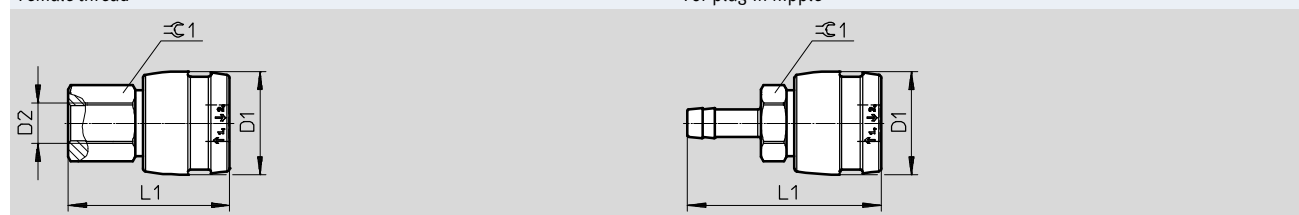
Download CAD data → www.festo.com

Male thread



Female thread

For plug-in nipple



Connection	D1 Ø	D2	L1	± 1
Male thread, quick coupling socket NPHS-D6-M				
G¼	30.8	G¼	76	19
G¾		G¾	77	22
G½		G½	80.5	24
Male thread, quick coupling socket NPHS-D6-P				
G⅛	34	G⅛	46.5	22
G¼		G¼	48	22
G¾		G¾	49	22
G½		G½	50.5	24
Female thread				
G¼	34	G¼	53	22
G¾		G¾	53	22
G½		G½	56	24
For plug-in nipple				
I.D. 9 mm	34	–	63.6	22