

Quick coupling sockets/plugs

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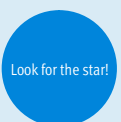
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More than 2200 product

★ Generally ready for shipping ex works in 5 days
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Up to 6 x 10¹² variants per product series



Quick coupling sockets/plugs

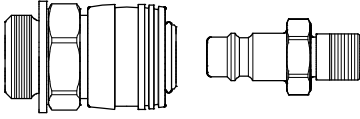
Key features

FESTO

Mode of operation

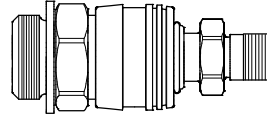
Plug-in coupling with quick coupling socket KD and quick coupling plug KS, shut-off at one or both ends

Coupling



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

Uncoupling



To unlock, push the releasing sleeve.

When uncoupling it is important to hold the quick coupling plug until it is fully vented.

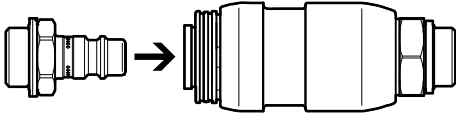
Quick coupling sockets/plugs

Key features

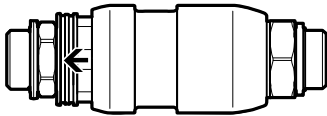
Mode of operation

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

Coupling

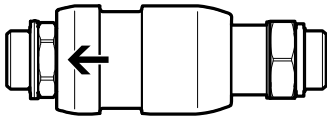


To lock the coupling, push the plug into the socket. The plug automatically engages with an audible click when in a specific position.



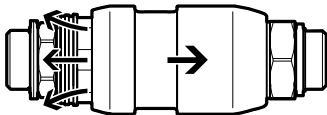
When the plug is engaged, the releasing sleeve shifts one position in the direction of the plug. This releases the locking mechanism between the releasing sleeve and the sliding sleeve. The sliding sleeve can now be actuated.

Pressurising



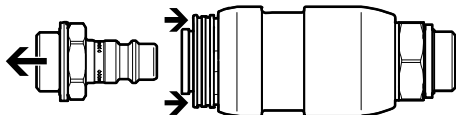
To pressurise, slide the sliding sleeve in the direction of the plug.

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.

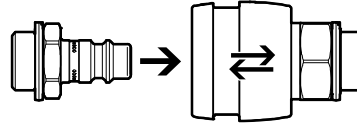
Decoupling



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.

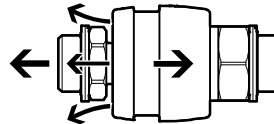
Quick coupling socket NPHS-D6-P and quick coupling plug NPHS-S6

Coupling



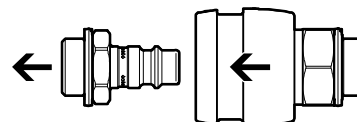
To lock the coupling, push the plug into the socket. The plug automatically engages with an audible click when in a specific position. In the process, the releasing sleeve moves briefly backwards and then forwards again.

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.

Decoupling





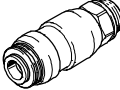

Next release the plug from the ball locking mechanism by pulling the releasing sleeve. This releases the plug completely so that it can be removed from the socket. The plug should only be removed after all the air has been exhausted.

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

Quick coupling sockets/plugs

Product range overview

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Function	Version	Type	Brief description	Standard nominal flow rate [l/min]	Nominal width [mm]	→ Page/Internet
Plug-in coupling	Shut off on one side					
		KD1/KS1	For standard applications, without safety function	44	1.5	6
		KD2/KS2		68 ... 135	2 ... 2.9	8
		KD3/KS3		158 ... 666	2.9 ... 5	11
		KD4/KS4		252 ... 1350	2.9 ... 10	14
	Shut off on both sides					
	KD3-...-R/ KS3-...-R	Both sides are sealed after unlocking	563	4.2 ... 5	18	
	KD4-...-R/ KS4-...-R		765	8	18	
Safety coupling	Shut off on one side					
		NPHS-D6-M/ NPHS-S6	Exhaust the air on the plug side by sliding the sliding sleeve and then unlocking the coupling	1750 ... 2100	5.5 ... 10	20
			NPHS-D6-P/ NPHS-S6	Exhaust the air on the plug side by pushing the releasing sleeve and then unlocking the coupling	875 ... 2083	5 ... 11

Coupling/tubing combination options						
Tubing		Quick coupling socket/plug				
		KD1/KS1	KD2/KS2	KD3/KS3	KD4/KS4	NPHS-D6/NPHS-S6
With standard I.D.	Polyurethane					
	PU-9	-	-	-	■	■
With standard O.D.	Polyurethane					
	PUN-3	■	-	-	-	-
	PUN-4	-	■	-	-	-
	PUN-6	-	■	■	■	-
	PUN-8	-	-	■	■	-
	Polyamide					
	PAN-4	-	■	-	-	-
	PAN-6	-	■	■	■	-
	PAN-8	-	-	■	■	-

Quick coupling sockets/plugs

Product range overview



Quick coupling socket/plug combination options										
Connection	Size 1		Size 2		Size 3 ¹⁾		Size 4 ¹⁾		Size 6	
	Socket KD1	Plug KS1	Socket KD2	Plug KS2	Socket KD3	Plug KS3	Socket KD4	Plug KS4	Socket NPHS-D6	Plug NPHS-S6
Male thread										
M3	■	-	-	-	-	-	-	-	-	-
M5	-	-	■	■	-	-	-	-	-	-
G ¹ / ₈	-	-	-	-	■	■	-	-	■	■
G ¹ / ₄	-	-	-	-	■	■	■	■	■	■
G ³ / ₈	-	-	-	-	-	-	■	■	■	■
G ¹ / ₂	-	-	-	-	-	-	■	■	■	■
Female thread										
M5	-	-	■	■	-	-	-	-	-	-
G ¹ / ₈	-	-	-	-	■	■	-	-	-	-
G ¹ / ₄	-	-	-	-	■	■	■	■	■	■
G ³ / ₈	-	-	-	-	-	-	■	■	■	■
G ¹ / ₂	-	-	-	-	-	-	■	■	■	■
Quick connector with union nut										
CK-3	-	-	■	■	-	-	-	-	-	-
CK-4	-	-	■	■	■	■	-	■	-	-
CK-6	-	-	-	-	■	■	■	■	-	-
CK-9	-	-	-	-	-	-	■	■	-	-
Barbed fitting										
CN-2	-	■	-	-	-	-	-	-	-	-
N-6	-	-	-	-	-	-	-	■	-	-
N-9	-	-	-	-	-	-	■	■	■	■

1) Quick coupling socket/plug, shut off on both sides: KD3-...-A-R thread G¹/₈ only, KD4-...-A-R G¹/₄ only

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

Technical data

Plug-in coupling KD1/KS1

-  - Flow rate
44 l/min
-  - Nominal size
1.5 mm



General technical data		
Pneumatic connection 1	Quick coupling socket KD1	Quick coupling plug KS1
	Male thread	Barbed fitting
	M3	CN-2
Nominal size [mm]	1.5	1.5
Nominal tightening torque [Nm]	0.6 ±10%	-
Product weight [g]	2.9	0.4

Standard nominal flow rate q_{nN}^1 [l/min]		
Quick coupling socket/plug combination	Quick coupling socket KD1	
	Male thread	
	M3	
Quick coupling plug KS1		
Barbed fitting CN-2	44	

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

Operating and environmental conditions	
Operating pressure complete [bar]	-0.95 ... +12
temperature range	
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:-:-]
Note on operating/pilot medium	Operation with lubricated medium possible
Ambient temperature [°C]	-10 ... +60
Corrosion resistance class CRC ¹⁾	1

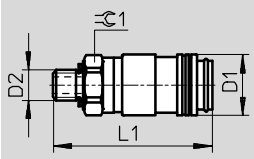
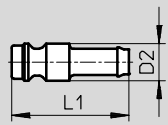
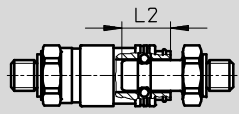
1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Materials		
	Quick coupling socket KD1	Quick coupling plug KS1
Housing	Nickel-plated brass	Nickel-plated brass
Releasing sleeve	Nickel-plated brass	-

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

Technical data

Dimensions Download CAD data → www.festo.com

Quick coupling socket Male thread	Quick coupling plug Barbed fitting	Insertion depth
		



Connection	D1 Ø	D2	L1	L2	±0.1
Male thread					
M3	6.5	M3	18.5	4.6	6
Barbed fitting					
CN-2	-	4	12	4.6	-


Ordering data					
Connection	Quick coupling socket		Quick coupling plug		
	Part No.	Type	Part No.	Type	
Male thread					
M3	151995	KD1-M3-A	-		
Barbed fitting					
CN-2	-		151996	KS1-CN-2	

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

Technical data

Plug-in coupling KD2/KS2

-  - Flow rate
68 ... 135 l/min
-  - Nominal size
2 ... 2.9 mm

-  - Note
All quick coupling socket types of the same size are compatible with all plugs of this size.



General technical data – Quick coupling socket KD2						
Pneumatic connection 1	Male thread		Female thread		Quick connector	
	M5	M5	M5	M5	CK-3	CK-4
Nominal size	[mm]	2.4	2.7	2	2	2.9
Nominal tightening torque	[Nm]	0.85 ±15%		-		
Product weight	[g]	10	12	11	16	

General technical data – Quick coupling plug KS2						
Pneumatic connection 1	Male thread		Female thread		Quick connector	
	M5	M5	M5	M5	CK-3	CK-4
Nominal size	[mm]	2.4	2.7	2	2	2.7
Nominal tightening torque	[Nm]	0.85 ±15%		-		
Product weight	[g]	5	5	4	11	

Standard nominal flow rate q _{nN} ¹⁾ [l/min]						
Quick coupling socket/plug combination	Quick coupling socket KD2					
	Male thread		Female thread		Quick connector	
	M5	M5	M5	M5	CK-3	CK-4
Quick coupling plug KS2						
Male thread	M5	126	133	85	129	
Female thread	M5	131	135	88	130	
Quick connector	CK-3	83	84	68	82	
	CK-4	120	126	86	123	

1) Measured at p₁ = 6 bar and Δp = 1 bar

Operating and environmental conditions	
Operating pressure complete	[bar] -0.95 ... +12
temperature range	
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:-:-]
Note on operating/pilot medium	Operation with lubricated medium possible
Ambient temperature	[°C] -10 ... +60
Corrosion resistance class CRC ¹⁾	1

1) 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).

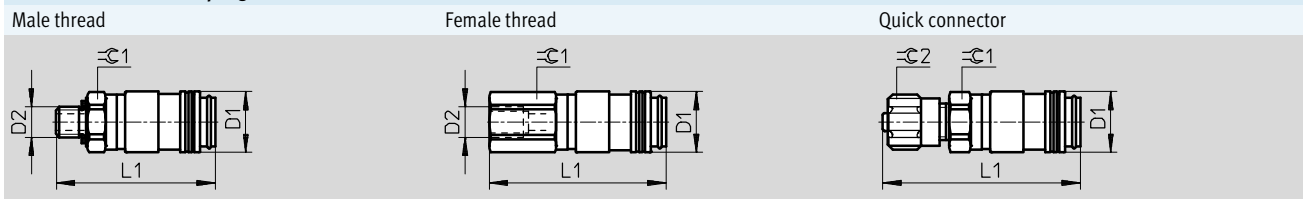
Materials		
	Quick coupling socket KD2	Quick coupling plug KS2
Housing	Nickel-plated brass	Nickel-plated brass
Releasing sleeve	Nickel-plated brass	-
Note on materials	RoHS-compliant	

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

Technical data

Dimensions – Quick coupling socket

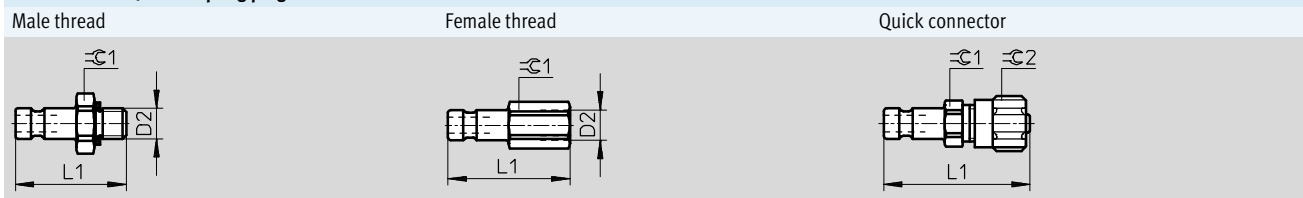
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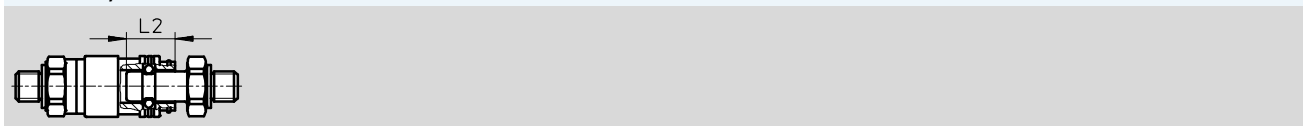
Connection	D1 Ø	D2	L1	rC1	rC2
Male thread					
M5	10	M5	26.25	9	-
Female thread					
M5	10	M5	29.05	9	-
Quick connector with union nut					
CK-3	10	-	32.55	9	8
CK-4			35.75	11	12

Dimensions – Quick coupling plug

Download CAD data → www.festo.com



Insertion depth



Connection	D1 Ø	D2	L1	L2	rC1	rC2
Male thread						
M5	10	M5	18.2	7.95	9	-
Female thread						
M5	10	M5	20	7.95	7	-
Quick connector with union nut						
CK-3	10	-	24	7.95	7	8
CK-4			27.2		11	12

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

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Technical data


Ordering data				
Connection	Quick coupling socket		Quick coupling plug	
	Part No.	Type	Part No.	Type
Male thread				
M5	4087	KD2-M5-A	531658	KS2-M5-A
Female thread				
M5	531620	KD2-M5-I	531660	KS2-M5-I
Quick connector with union nut				
CK-3	531621	KD2-CK-3	4091	KS2-CK-3
CK-4	531622	KD2-CK-4	4090	KS2-CK-4

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

Technical data

Plug-in coupling KD3/KS3

-  Flow rate
158 ... 666 l/min
-  Nominal size
2.9 ... 5 mm

-  Note
All quick coupling socket types of the same size are compatible with all plugs of this size.



General technical data – Quick coupling socket KD3						
Pneumatic connection 1	Male thread		Female thread		Quick connector	
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{8}$	G $\frac{1}{4}$	CK-4	CK-6
Nominal size [mm]	4.95	5	5	5	2.9	4.9
Nominal tightening torque [Nm]	5 ±15%	9.5 ±15%	5 ±15%	9.5 ±15%	–	
Product weight [g]	28	35	32	47	31	32

General technical data – Quick coupling plug KS3						
Pneumatic connection 1	Male thread		Female thread		Quick connector	
	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{8}$	G $\frac{1}{4}$	CK-4	CK-6
Nominal size [mm]	4.95	4.95	4.95	4.95	2.9	4.9
Nominal tightening torque [Nm]	5 ±15%	9.5 ±15%	5 ±15%	9.5 ±15%	–	
Product weight [g]	13	23	16	27	16	21

Standard nominal flow rate qnN ¹⁾ [l/min]							
Quick coupling socket/plug combination	Quick coupling socket KD3						
		Male thread		Female thread		Quick connector	
		G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{8}$	G $\frac{1}{4}$	CK-4	CK-6
Quick coupling plug KS3							
Male thread	G $\frac{1}{8}$	563	581	585	648	225	464
	G $\frac{1}{4}$	558	581	594	653	225	455
Female thread	G $\frac{1}{8}$	536	554	558	617	225	446
	G $\frac{1}{4}$	572	594	603	666	225	468
Quick connector	CK-4	185	185	185	185	158	180
	CK-6	428	437	441	464	216	378

1) Measured at p₁ = 6 bar and Δp = 1 bar

Operating and environmental conditions	
Operating pressure complete temperature range [bar]	–0.95 ... +12
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:--:–]
Note on operating/pilot medium	Operation with lubricated medium possible
Ambient temperature [°C]	–10 ... +60
Corrosion resistance class CRC ¹⁾	1

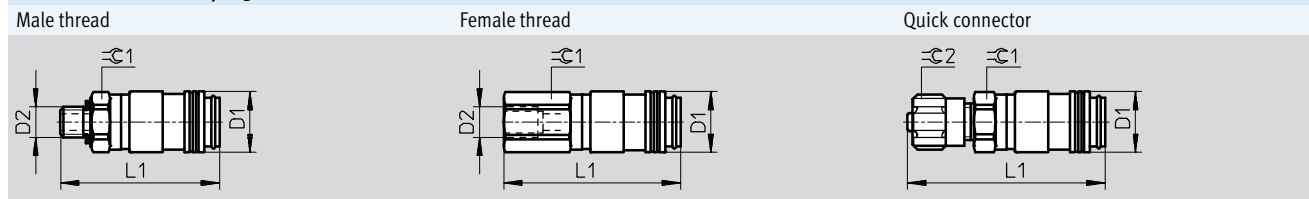
1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Materials		
	Quick coupling socket KD3	Quick coupling plug KS3
Housing	Nickel-plated brass	Nickel-plated brass
Releasing sleeve	Nickel-plated brass	–
Note on materials	RoHS-compliant	

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

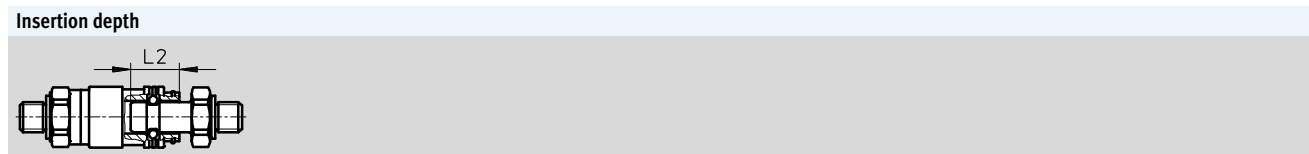
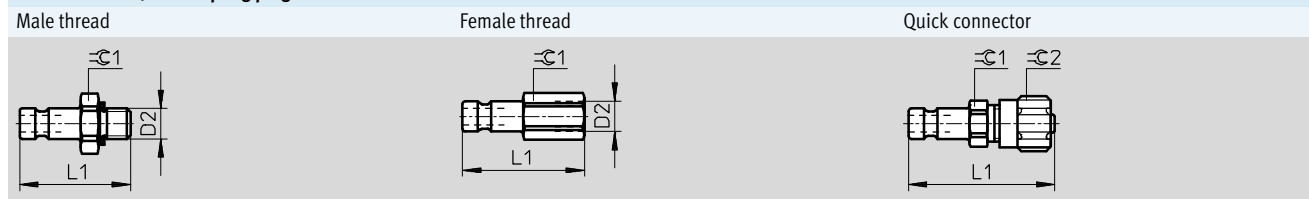
Technical data

Dimensions – Quick coupling socket Download CAD data → www.festo.com



Connection	D1 Ø	D2	L1	⊘ C1	⊘ C2
Male thread					
G ¹ / ₈	16	G ¹ / ₈	36	14	-
G ¹ / ₄		G ¹ / ₄	37.6	17	
Female thread					
G ¹ / ₈	16	G ¹ / ₈	38.2	14	-
G ¹ / ₄		G ¹ / ₄	45.2	17	
Quick connector with union nut					
CK-4	16	-	43.1	14	12
CK-6			43.2		14

Dimensions – Quick coupling plug Download CAD data → www.festo.com



Connection	D1 Ø	D2	L1	L2	⊘ C1	⊘ C2
Male thread						
G ¹ / ₈	16	G ¹ / ₈	25	13.6	13	-
G ¹ / ₄		G ¹ / ₄	27.6		17	
Female thread						
G ¹ / ₈	16	G ¹ / ₈	28	13.6	13	-
G ¹ / ₄		G ¹ / ₄	32.6		17	
Quick connector with union nut						
CK-4	16	-	34.5	13.6	12	12
CK-6			34.6		14	14

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

Technical data



Ordering data				
Connection	Quick coupling socket		Quick coupling plug	
	Part No.	Type	Part No.	Type
Male thread				
G $\frac{1}{8}$	2142	KD3- $\frac{1}{8}$ -A	3492	KS3- $\frac{1}{8}$ -A
G $\frac{1}{4}$	531626	KD3- $\frac{1}{4}$ -A	531666	KS3- $\frac{1}{4}$ -A
Female thread				
G $\frac{1}{8}$	531627	KD3- $\frac{1}{8}$ -I	531668	KS3- $\frac{1}{8}$ -I
G $\frac{1}{4}$	531628	KD3- $\frac{1}{4}$ -I	531669	KS3- $\frac{1}{4}$ -I
Quick connector with union nut				
CK-4	531629	KD3-CK-4	3326	KS3-CK-4
CK-6	531630	KD3-CK-6	3478	KS3-CK-6

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


Technical data

Plug-in coupling KD4/KS4

- Releasing sleeve made from polymer material
- Quick coupling sockets KD4 can be combined with all quick coupling plugs NPHS-S6 → 20

-  - Flow rate
252 ... 1,350 l/min
-  - Nominal size
2.9 ... 10 mm



-  - Note

All quick coupling socket types of the same size are compatible with all plugs of this size.
The hardened quick coupling plugs NPHS-S6 are recommended for use with couplings that are frequently subject to pressure surges or that have to be frequently mated.

General technical data – Quick coupling socket KD4										
Pneumatic connection 1	Male thread			Female thread			Quick connector		Barbed fitting	
	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	CK-6	CK-9	N-9	
Nominal size [mm]	8	10		7.2			4.9	7.4	7.4	
Nominal tightening torque [Nm]	9.5 ±15%	21.5 ±15%	32.5 ±20%	9.5 ±15%	21.5 ±15%	32.5 ±20%	-			
Product weight [g]	57	62	78	88	82	86	63	71	57	

General technical data – Quick coupling plug KS4											
Pneumatic connection 1	Male thread			Female thread			Quick connector			Barbed fitting	
	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	CK-4	CK-6	CK-9	N-6	N-9
Nominal size [mm]	7.85			7.85			2.9	4.9	7.4	4.5	7
Nominal tightening torque [Nm]	9.5 ±15%	21.5 ±15%	32.5 ±20%	9.5 ±15%	21.5 ±15%	32.5 ±20%	-				
Product weight [g]	21	29	55	31	32	57	26	26	26	15	18

Standard nominal flow rate q_{nN^1} [l/min]										
Quick coupling socket/plug combination	Quick coupling socket KD4						Quick connector		Barbed fitting	
	Male thread			Female thread			Quick connector		Barbed fitting	
	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	CK-6	CK-9	N-9	
Quick coupling plug KS4										
Male thread	G $\frac{1}{4}$	1,260	1,242	1,296	1,283	1,305	1,323	756	1,098	1,143
	G $\frac{3}{8}$	1,283	1,274	1,319	1,283	1,323	1,323	756	1,116	1,152
	G $\frac{1}{2}$	1,283	1,260	1,301	1,283	1,323	1,323	756	1,098	1,143
Female thread	G $\frac{1}{4}$	1,125	1,125	1,148	1,130	1,161	1,161	720	1,008	1,035
	G $\frac{3}{8}$	1,287	1,274	1,337	1,292	1,350	1,332	756	1,116	1,152
	G $\frac{1}{2}$	1,287	1,260	1,305	1,292	1,314	1,305	756	1,116	1,152
Quick connector	CK-4	261	261	257	257	261	257	252	261	
	CK-6	486	482	482	482	486	495	432	477	
	CK-9	1,152	1,143	1,179	1,161	1,197	1,197	725	1,017	1,044
Barbed fitting	N-6	486	482	482	482	486	495	441	477	
	N-9	1,107	1,089	1,107	1,098	1,134	1,125	711	981	1,008

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

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

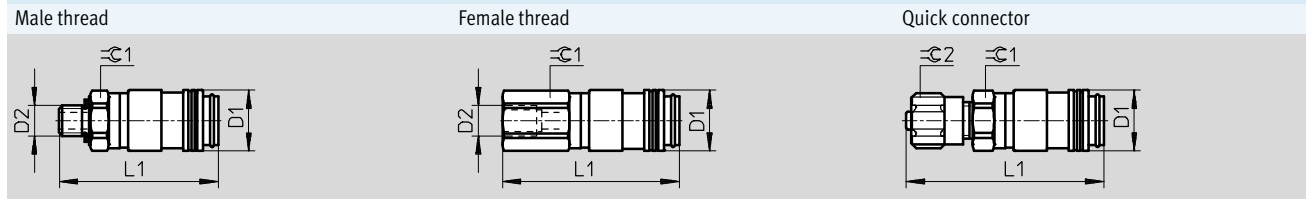
Technical data

Operating and environmental conditions	
Operating pressure complete temperature range [bar]	-0.95 ... +12
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:-:-]
Note on operating/pilot medium	Operation with lubricated medium possible
Ambient temperature [°C]	-10 ... +60
Corrosion resistance class CRC ¹⁾	1

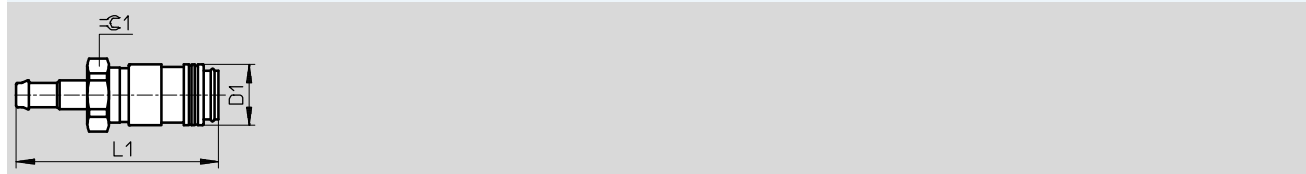
1) Corrosion resistance class CRC 1 to Festo standard FN 940070
 Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Materials	Quick coupling socket KD4	Quick coupling plug KS4
Housing	Nickel-plated brass	Nickel-plated brass
Releasing sleeve	Polypropylene	-
Note on materials	RoHS-compliant	

Dimensions – Quick coupling socket Download CAD data → www.festo.com



Barbed fitting

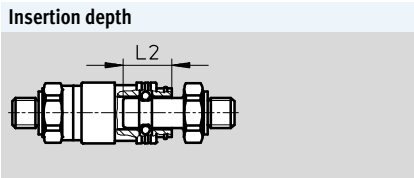
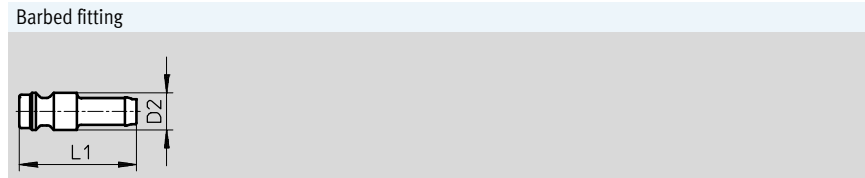
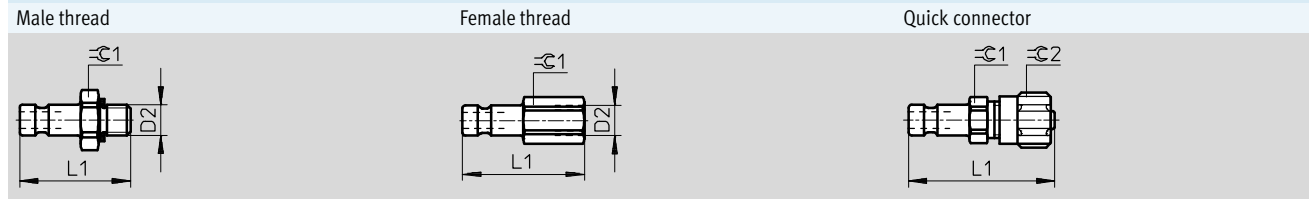


Connection	D1 Ø	D2	L1	≡C1	≡C2
Male thread					
G1/4	26.4	G1/4	40.5	22	-
G3/8		G3/8	41.5		
G1/2		G1/2	43		
Female thread					
G1/4	26.4	G1/4	46	22	-
G3/8		G3/8	47.5		
G1/2		G1/2	50.5		
Quick connector with union nut					
CK-6	26.4	-	46.4	22	14
CK-9			49.8		19
Barbed fitting					
N-9	26.4	12	56.2	21	-

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

Technical data

Dimensions – Quick coupling plug Download CAD data → www.festo.com



Connection	D1 Ø	D2	L1	L2	⊘ 1	⊘ 2
Male thread						
G¼	26.4	G¼	32.5	14.95	17	-
G¾		G¾	34		19	
G½		G½	37.5		24	
Female thread						
G¼	26.4	G¼	38.5	14.95	17	-
G¾		G¾	39.5		19	
G½		G½	44		24	
Quick connector with union nut						
CK-4	-	-	40.2	14.95	17	12
CK-6	26.4		40.3			14
CK-9			43.7			19
Barbed fitting						
N-6	26.4	12	47	14.95	-	-
N-9						

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

Technical data

Ordering data				
Connection	Quick coupling socket		Quick coupling plug	
	Part No.	Type	Part No.	Type
Male thread				
G $\frac{1}{4}$	★ 2143	KD4- $\frac{1}{4}$ -A	2154	KS4- $\frac{1}{4}$ -A
G $\frac{3}{8}$	★ 2144	KD4- $\frac{3}{8}$ -A	2155	KS4- $\frac{3}{8}$ -A
G $\frac{1}{2}$	★ 2145	KD4- $\frac{1}{2}$ -A	531676	KS4- $\frac{1}{2}$ -A
Female thread				
G $\frac{1}{4}$	531636	KD4- $\frac{1}{4}$ -I	531678	KS4- $\frac{1}{4}$ -I
G $\frac{3}{8}$	531637	KD4- $\frac{3}{8}$ -I	531679	KS4- $\frac{3}{8}$ -I
G $\frac{1}{2}$	531638	KD4- $\frac{1}{2}$ -I	531680	KS4- $\frac{1}{2}$ -I
Quick connector with union nut				
CK-4	-		2150	KS4-CK-4
CK-6	531639	KD4-CK-6	2151	KS4-CK-6
CK-9	531640	KD4-CK-9	531683	KS4-CK-9
Barbed fitting				
N-6	-		2152	KS4-N-6
N-9	531641	KD4-N-9	2153	KS4-N-9

Festo core product range



- ★ Generally ready for shipping ex works in 24 hours
- ☆ Generally ready for shipping ex works in 5 days


Quick coupling sockets/plugs KD/KS, shut-off on both sides

Technical data



Plug-in coupling KD...-R/KS...-R

- Both sides are sealed after unlocking

-  - Flow rate
563 l/min
-  - Nominal size
4.2 ... 5 mm

-  - Note
Only quick coupling sockets and plugs with the same function and size can be combined.



-  - Flow rate
765 l/min
-  - Nominal size
8 mm



General technical data				
Pneumatic connection 1	Quick coupling socket KD3	Quick coupling plug KS3	Quick coupling socket KD4	Quick coupling plug KS4
	Male thread	Male thread	Male thread	Male thread
	G ¹ / ₈	G ¹ / ₈	G ¹ / ₄	G ¹ / ₄
Nominal size [mm]	5	4.2	8	8
Nominal tightening torque [Nm]	5 ±15%	5 ±15%	9.5 ±15%	9.5 ±15%
Product weight [g]	28	32	58	46

Standard nominal flow rate q _N ¹⁾ [l/min]		
Quick coupling socket/plug combination	Quick coupling socket KD3	Quick coupling socket KD4
	Male thread	Male thread
	G ¹ / ₈	G ¹ / ₄
Quick coupling plug KS3		
Male thread G ¹ / ₈	563	-
Quick coupling plug KS4		
Male thread G ¹ / ₄	-	765

1) Measured at p₁ = 6 bar and Δp = 1 bar

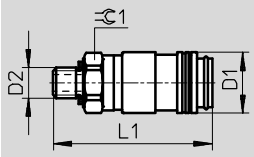
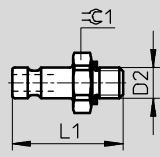
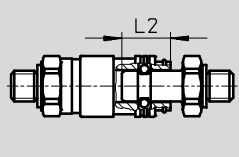
Operating and environmental conditions	
Operating pressure complete [bar]	-0.95 ... +12
temperature range	
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:--:-]
Note on operating/pilot medium	Operation with lubricated medium possible
Ambient temperature [°C]	-10 ... +60
Corrosion resistance class CRC ¹⁾	1

1) 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).

Quick coupling sockets/plugs KD/KS, shut-off on both sides

Technical data

Materials				
	Quick coupling socket	Quick coupling plug	Quick coupling socket	Quick coupling plug
	KD3	KS3	KD4	KS4
Housing	Brass		Brass	
Releasing sleeve	Nickel-plated brass	-	Polypropylene	-
Note on materials	RoHS-compliant			

Dimensions		Download CAD data → www.festo.com
Quick coupling socket	Quick coupling plug	Insertion depth
Male thread		
		

Type	D1 ∅	D2	L1		L2	±0.1
			Quick coupling socket	Quick coupling plug		
Male thread						
G ¹ / ₈	16	G ¹ / ₈	36	39.8	13.6	14
G ¹ / ₄	26.4	G ¹ / ₄	40.5	42.5	14.95	22

Ordering data					
Connection	Quick coupling socket			Quick coupling plug	
	Part No.	Type		Part No.	Type
G ¹ / ₈	531659	KD3- ¹ / ₈ -A-R		531667	KS3- ¹ / ₈ -A-R
G ¹ / ₄	531694	KD4- ¹ / ₄ -A-R		531677	KS4- ¹ / ₄ -A-R



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

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-

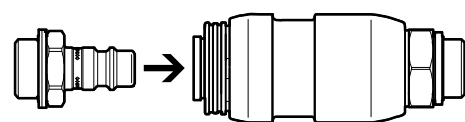
ets NPHS-D6-P may only be used with the hardened quick coupling plugs NPHS-S6. No safety function when combining

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

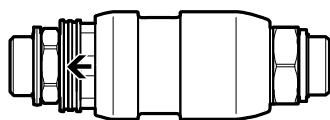
Mode of operation

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.

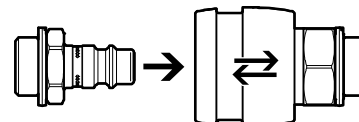
Pressurising



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.

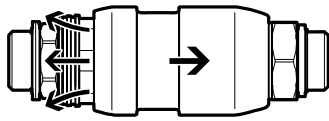
Quick coupling sockets/plugs NPHS, shut-off on one side

Technical data

Mode of operation

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

Exhausting

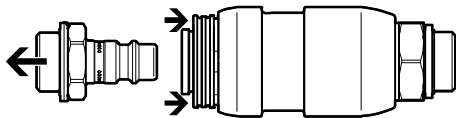


To exhaust, slide the sliding sleeve in the direction of the thread on the quick coupling socket. The air from the plug and the components connected to it can escape. The air on the coupling side is shut off. The releasing sleeve is now accessible.

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

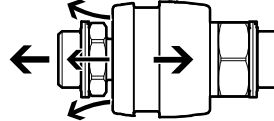
Pressurise or exhaust the coupling to a maximum of 10 bar only. Hearing protection is recommended, especially at higher operating pressures.

 Note

Safety exhaust couplings with quick coupling sockets NPHS-D6 fulfil the requirements for pneumatic systems to EN ISO 4414.

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

Exhausting

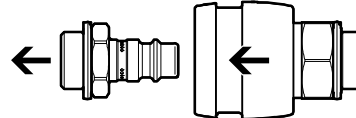


To exhaust, first slide the releasing sleeve in the direction of the thread on the quick coupling socket. This releases the pin locking mechanism of the coupling. The plug moves approx. 5 mm out of the coupling and is held in this position by the ball locking mechanism of the coupling. The air from the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

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

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
	G $\frac{3}{8}$	1800	2050
	G $\frac{1}{2}$	1750	2000

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

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]									
Quick coupling socket/plug combination	Quick coupling socket NPHS-D6-P								
	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	
Quick coupling plug NPHS-S6									
Male thread	G $\frac{1}{8}$	875	1183	1216	1233	1183	1203	1238	1093
	G $\frac{1}{4}$	1038	1916	2033	2016	2033	2000	1983	1585
	G $\frac{3}{8}$	1038	1883	2033	1983	2033	1950	1950	1585
	G $\frac{1}{2}$	1002	1883	1966	1950	1966	1916	1916	1533
Female thread	G $\frac{1}{4}$	1002	1883	1950	1916	1800	1800	1008	1503
	G $\frac{3}{8}$	1050	1966	2083	2016	2050	2083	2050	1613
	G $\frac{1}{2}$	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).

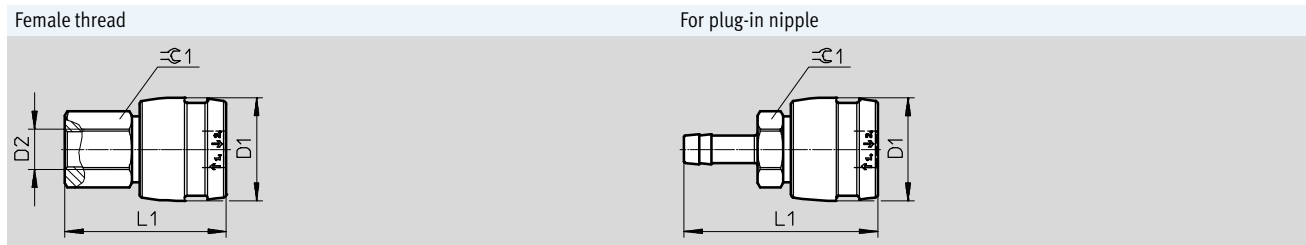
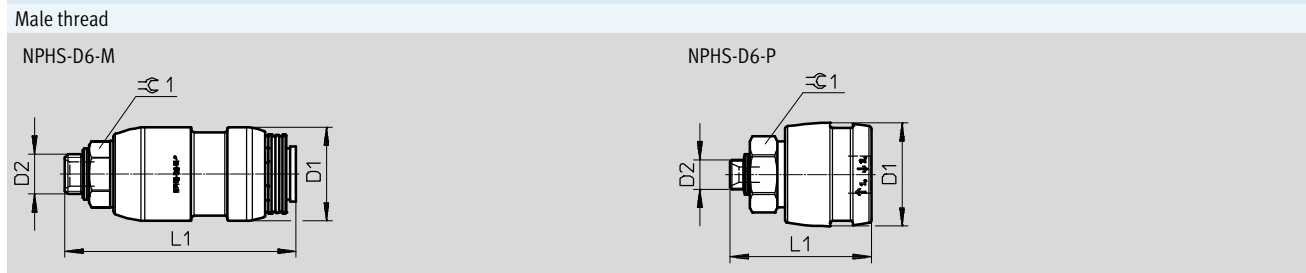
4) Measured at a distance of 1 m, 10 l volume via the coupling, at pressure open and exhausted.

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

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

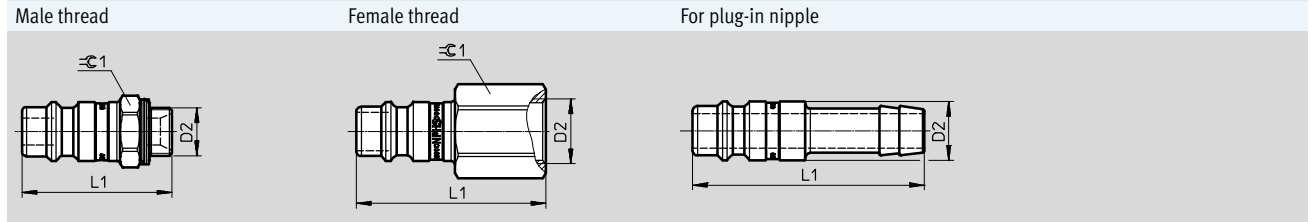


Connection	D1 Ø	D2	L1	±0.1
Male thread, quick coupling socket NPHS-D6-M				
G1/4	30.8	G1/4	76	19
G3/8		G3/8	77	22
G1/2		G1/2	80.5	24
Male thread, quick coupling socket NPHS-D6-P				
G1/8	34	G1/8	46.5	22
G1/4		G1/4	48	22
G3/8		G3/8	49	22
G1/2		G1/2	50.5	24
Female thread				
G1/4	34	G1/4	53	22
G3/8		G3/8	53	22
G1/2		G1/2	56	24
For plug-in nipple				
I.D. 9 mm	34	-	63.6	22

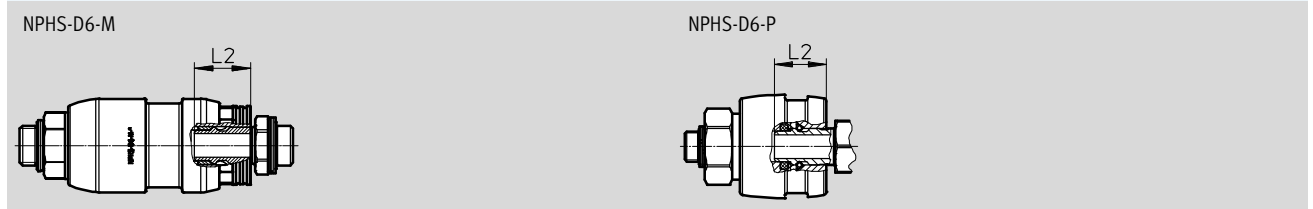
Quick coupling sockets/plugs NPHS, shut-off on one side

Technical data

Dimensions – Quick coupling plug Download CAD data → www.festo.com



Insertion depth



Type	D2	L1	L2		±0.1
			NPHS-D6-M	NPHS-D6-P	
Male thread					
G1/8	G1/8	30.5	18.6 ±0.4	17.1 ±0.3	13
G1/4	G1/4	32.5			17
G3/8	G3/8	34			19
G1/2	G1/2	37.5			24
Female thread					
G1/4	G1/4	38.5	18.6 ±0.4	17.1 ±0.3	17
G3/8	G3/8	39.5			19
G1/2	G1/2	44			24
For plug-in nipple					
I.D. 9 mm	12	47	18.6 ±0.4	17.1 ±0.3	–

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

Technical data

Ordering data – Quick coupling socket				
Connection	Releasing sleeve made of plastic		Releasing sleeve made of metal	
	Part No.	Type	Part No.	Type
Male thread				
G $\frac{1}{8}$	8059266	NPHS-D6-P-G18		–
G $\frac{1}{4}$	★ 8059267	NPHS-D6-P-G14	8059275	NPHS-D6-M-G14
G $\frac{3}{8}$	★ 8059268	NPHS-D6-P-G38	8059276	NPHS-D6-M-G38
G $\frac{1}{2}$	★ 8059269	NPHS-D6-P-G12	8059277	NPHS-D6-M-G12
Female thread				
G $\frac{1}{4}$	8059271	NPHS-D6-P-G14F		–
G $\frac{3}{8}$	8059272	NPHS-D6-P-G38F		–
G $\frac{1}{2}$	8059273	NPHS-D6-P-G12F		–
For plug-in nipple				
I.D. 9 mm	8059274	NPHS-D6-P-BC9		–

Ordering data – Quick coupling plug			
Connection	Part No.	Type	
Male thread			
G $\frac{1}{8}$	★ 8059257	NPHS-S6-M-G18	
G $\frac{1}{4}$	★ 8059258	NPHS-S6-M-G14	
G $\frac{3}{8}$	★ 8059259	NPHS-S6-M-G38	
G $\frac{1}{2}$	★ 8059260	NPHS-S6-M-G12	
Female thread			
G $\frac{1}{4}$	★ 8059262	NPHS-S6-M-G14F	
G $\frac{3}{8}$	★ 8059263	NPHS-S6-M-G38F	
G $\frac{1}{2}$	★ 8059264	NPHS-S6-M-G12F	
For plug-in nipple			
I.D. 9 mm	8059265	NPHS-S6-M-BC9	

Festo core product range

- ★ Generally ready for shipping ex works in 24 hours
- ☆ Generally ready for shipping ex works in 5 days

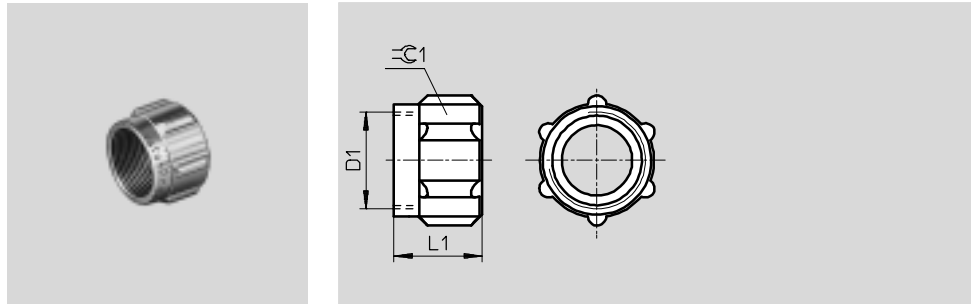
Union nuts MCK

Accessories



Union nut MCK¹⁾
for quick connector

Material:
Wrought aluminium alloy
Conforms to RoHS



Ordering data						
Nominal size [mm]	D1	L1	⊖ C 1	Weight [g]	Part No.	Type
3	M6x0.75	8.5	8	0.6	533672	MCK-PK-3-KD
4	M10x1	11	12	1.6	533673	MCK-PK-4-KD
6	M12x1	11	14	1.9	533674	MCK-PK-6-KD
9	M16x1	14.4	19	5	533675	MCK-PK-9-KD
13	M22x1	18	24	8	533676	MCK-PK-13-KD

1) 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).

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