

NCB Quick connections

All industrial applications





NCB, reliable and versatile connection...

Applications

The NCB range with flush faces meets cleanliness requirements for industry. It is suitable for the production processes in many activity sectors:

- pharmaceutical
- chemical
- agri-food
- railway
- automotive
- maritime
- nuclear
- electronics cooling
- plastics
- oil and gas, etc.

Examples are: test benches, fluid sampling, thermoregulation of mobile containers, inerting, cooling of electronic cabinets.

Visual identification

As an option, blue or red sleeves enabling operators to immediately identify the circuits.

Compatible with the SCB range

The new NCB range is fully compatible with Stäubli products, which enables each customer to make the transition without altering standards.

Non-spill design

Stäubli antipollution flush face technology guarantees non spill connections as well as optimum cleaning during the production phase. This concept avoids any introduction of air or polluting agent into the circuit or workplace.

Reliability: 3 types of locking

3 versions to choose from: ball locking system (standard option), safety locking system (VS option) and screw locking system (VR option for higher pressure levels).





... for all activity sectors.

Easy cleaning

The high quality surface finish in the fluid stream and a systematic electrolytic polishing allow for easy and efficient cleaning.

Resistant construction

All of the parts of the NCB coupling are made of type 316 stainless steel which allows for the transportation of acidic or corrosive fluids.

A full range

The NCB products are available in four diameters: 04, 08, 12 and 20 mm and provide a very wide assembly compatibility as well as easily adapting to the pre-existing system interfaces (bulkheads, threads etc.). Different seal types are available.

Traceability of material 3.1

Traceability of both components and products from metal casting right through to the finished product is available on request from Stäubli.



The opportunity to spend less and contribute to a sustainable development programme

With Stäubli, you can rely on:

- the performance of your equipment,
- reliability of long-term investments,
- no workplace pollution.



Technical features

Construction

- Connecting plugs and sockets made entirely from 316L stainless steel
- Sealing
 - Nitrile seal (NBR), in standard
 - Other seal material available, see on page 6
- Spring made of stainless steel
- Identification sleeve for the circuits made of light anodised alloy
- Protective caps:
 - On the sockets: POM.H
 - On plugs: chloroprene

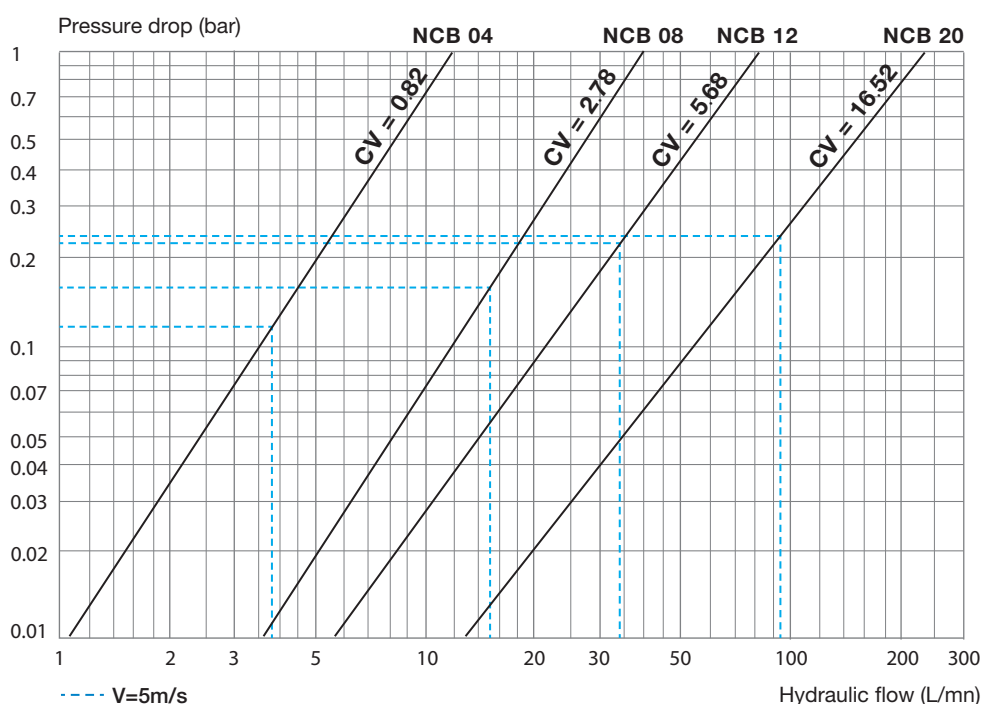
Recommendations for use

- For heat transfer fluids, hydrofluorocarbons and other fluids with degreasing properties: please contact us.
- To ensure efficient operation of our products, maximum particle size should not exceed 100 µm.

Bore diameters (mm)	
Bore section (mm²)	
Versions	
Working pressure at 20°C (bar)	With JS3 seal
Vacuum retention in connected and disconnected positions (Ncm³/s)	
User temperatures without cap according to seal type	Standard nitrile
	Fluorocarbon
	Ethylene Propylene
	Perfluoroelastomer
Temperatures for using caps	
Loss of fluid on disconnection (cm³)	
Hydraulic charts flow/pressure drop	
Direction of flow: Plug > Socket	
Test conditions:	
Water	
Density: 998 kg/m³	
Viscosity: 1.08 cSt	



NCB 04	NCB 08		NCB 12		NCB 20	
4	8		12		20	
12.5	50		113		314	
Automatic	Automatic	Screw locking	Automatic	Screw locking	Automatic	Screw locking
160	80	160	80	160	100	160
50	50	50	50	50	50	50
1.10^{-3}	1.10^{-3}	1.10^{-3}	1.10^{-3}	1.10^{-3}	-	1.10^{-3}
(NBR) - 15°C à + 100°C	- 15°C à + 100°C		- 15°C à + 100°C		- 15°C à + 100°C	
(JV) - 10°C à + 200°C	- 10°C à + 200°C		- 10°C à + 200°C		- 10°C à + 200°C	
(JE) - 20°C à + 150°C	- 20°C à + 150°C		- 20°C à + 150°C		- 20°C à + 150°C	
(JK) 0°C à + 250°C	0°C à + 250°C		0°C à + 250°C		0°C à + 250°C	
(JS3) - 45°C à + 175°C	- 45°C à + 175°C		- 45°C à + 175°C		- 45°C à + 175°C	
- 20°C à + 100°C	- 20°C à + 100°C		- 20°C à + 100°C		- 20°C à + 100°C	
0.0035	0.0116	0.0116	0.0200	0.2000	0.0500	0.2300





Options

To create your part number, add to the standard part number (and in the order as shown below) the type of seal (other than nitrile) and any options.

Example of a complete part number with options:

NCBXX.XXX / IC / VS / JV / KR

1 2 3 4

1 Standard reference with nitrile seal

(pages 7 to 11)

2 Type of locking

code

Safety locking	VS
Screw locking	VR

3 Seal type (except for nitrile)

code

Fluorocarbon (FPM)	JV
Ethylene Propylene (EPDM)	JE
Ethylene Propylene (EPDM) with FDA* option	JE/FDA
Ethylene Propylene (EPDM) with USP** option	JE/USP
Perfluoroelastomer (FFKM)	JK
Fluorosilicone (FMQ)	JS3

4 Identification using colour-coded ring or sleeve except for NCB 20

Colour	code
Red	KR
Blue	KB


*In compliance with FDA requirements

**In compliance with requirements for class VI - 70°C of the in vivo §<88> tests according to USP34, National Formulary 29 of 2011.

Sealing kits KES (to be ordered separately)



Consisting of a retainer ring and O-ring, The KES ensure perfect tightness between the socket or plug and its support.

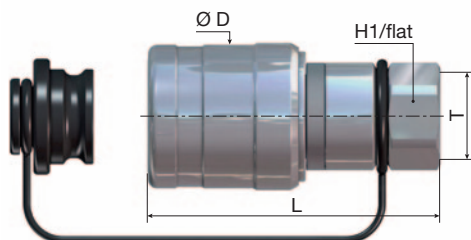
Part numbers compatible with this option are characterised by the symbol  in the part number tables on pages 7 to 11.

Depending on your application, choose the materials for the sleeve and joint in our documentation KES RP0030101.



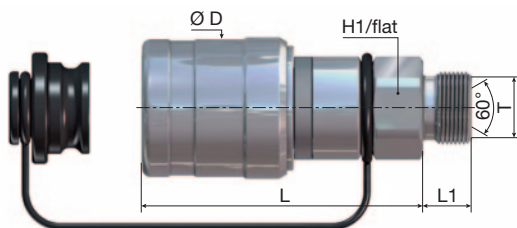
Socket part numbers

Female thread sockets



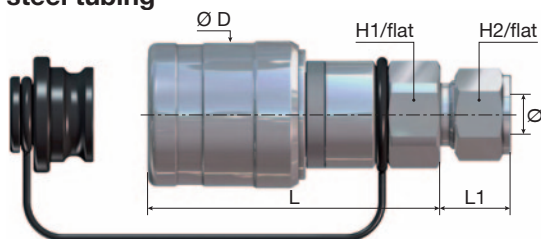
Models	Threads T	Part numbers	Sizes		
			Ø D	L	H1/flat
NCB 04	G 1/4	NCB 04.1101/IC	31	65	19
	NPT 1/4	NCB 04.1201/IC	31	65	19
	Rc 1/4	NCB 04.1111/IC	31	65	19
	UN 7/16 - 20	NCB 04.1311/IC	31	65	19
NCB 08	G 1/2	NCB 08.1103/IC	40.5	81	27
	NPT 1/2	NCB 08.1203/IC	40.5	81	27
	Rc 1/2	NCB 08.1113/IC	40.5	81	27
	UN 9/16	NCB 08.1314/IC	40.5	81	27
NCB 12	G 3/4	NCB 12.1104/IC	52	90.5	32
	NPT 3/4	NCB 12.1204/IC	52	90.5	32
	Rc 3/4	NCB 12.1114/IC	52	90.5	32
	UN 7/8 - 14	NCB 12.1322/IC	52	90.5	32
NCB 20	G 1	NCB 20.1105/IC	69	112.5	41
	NPT 1	NCB 20.1205/IC	69	112.5	41
	Rc 1	NCB 20.1115/IC	69	112.5	41

Male thread sockets cone 60°



Models	Threads T	Part numbers	Ø D	Sizes		
				L	L1	H1/flat
NCB 04	G 1/4	NCB 04.1151/IC	31	65	11	19
NCB 08	G 1/2	NCB 08.1153/IC	40.5	81	14	27
NCB 12	G 3/4	NCB 12.1154/IC	52	90.5	16	32
NCB 20	G 1	NCB 20.1155/IC	69	112.5	20	41

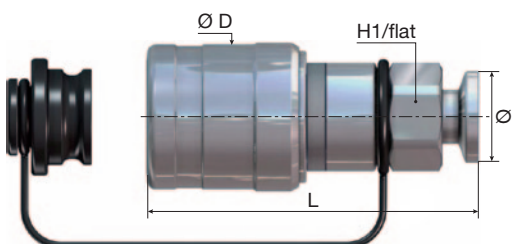
Sockets for calibrated* stainless steel tubing



Models	Outer tubing Ø	Part numbers	Sizes				
			Ø D	L	L1	H1/flat	H2/flat
NCB 04	8 mm	NCB 04.1768/IC	31	65	17	19	17
NCB 08	12 mm	NCB 08.1772/IC	40.5	81	19.5	27	22

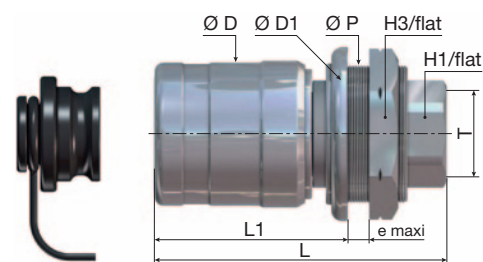
*Features of stainless steel tubing: in compliance with ISO 1127 standard class D4 and ASTM A269 class 1 (Assembly instructions RV 1300 100).

Clamp sockets



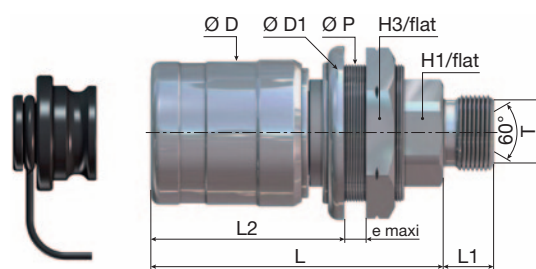
Models	Clamp Ø	Part numbers	Ø D	Sizes	
				L	H1/flat
NCB 04	25 mm	NCB 04.1025	31	75	19
NCB 08	25 mm	NCB 08.1025	40.5	91	28
	50 mm	NCB 08.1050	40.5	90	28
NCB 12	50 mm	NCB 12.1050	52	100	32
NCB 20	50 mm	NCB 20.1050	69	124.5	41

Panel mount female thread sockets



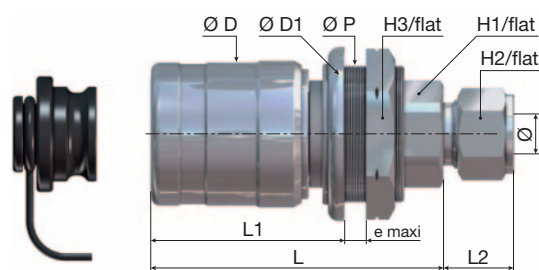
Models	Threads T	Part numbers	Sizes							
			Ø D	Ø D1	L	L1	H1/flat	H3/flat	Ø P	e maxi.
NCB 04	☞ G 1/4	NCB 04.2101/IC	31	37	65	44.5	19	32	28	6
	NPT 1/4	NCB 04.2201/IC	31	37	65	44.5	19	32	28	6
	Rc 1/4	NCB 04.2111/IC	31	37	65	44.5	19	32	28	6
	UN 7/16	NCB 04.2311/IC	31	37	65	44.5	19	32	28	6
NCB 08	☞ G 1/2	NCB 08.2103/IC	40.5	48	81	53.5	27	41	38	9
	NPT 1/2	NCB 08.2203/IC	40.5	48	81	53.5	27	41	38	9
	Rc 1/2	NCB 08.2113/IC	40.5	48	81	53.5	27	41	38	9
	UN 9/16 - 18	NCB 08.2314/IC	40.5	48	81	53.5	27	41	38	9
NCB 12	☞ G 3/4	NCB 12.2104/IC	52	60	90.5	60	32	55	50	9
	NPT 3/4	NCB 12.2204/IC	52	60	90.5	60	32	55	50	9
	Rc 3/4	NCB 12.2114/IC	52	60	90.5	60	32	55	50	9
	UN 7/8 - 14	NCB 12.2322/IC	52	60	90.5	60	32	55	50	9

Panel mount male thread cone 60° sockets



Models	Threads T	Part numbers	Sizes								
			Ø D	Ø D1	L	L1	L2	H1/flat	H3/flat	Ø P	e maxi.
NCB 04	☞ G 1/4	NCB 04.2151/IC	31	37	65	11	44.5	19	32	28	6
NCB 08	☞ G 1/2	NCB 08.2153/IC	40.5	48	81	14	53.5	27	41	38	9
NCB 12	☞ G 3/4	NCB 12.2154/IC	52	60	90.5	16	60	32	55	50	9

Panel mount sockets for calibrated* stainless steel tubing

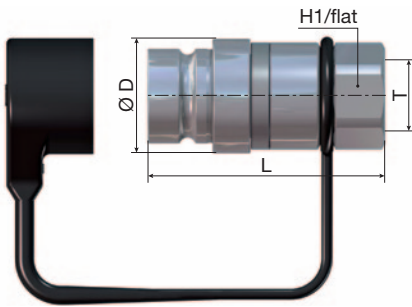


Models	Outer tubing Ø	Part numbers	Sizes									
			Ø D	Ø D1	L	L1	L2	H1/flat	H2/flat	H3/flat	Ø P	e maxi.
NCB 04	8 mm	NCB 04.2768/IC	31	37	65	44.5	17	19	17	32	28	6
NCB 08	12 mm	NCB 08.2772/IC	40.5	48	81	53.5	19.5	27	22	41	38	9

*Features of stainless steel tubing: in compliance with ISO 1127 standard class D4 and ASTM A269 class 1 (Assembly instructions RV 1300 100).

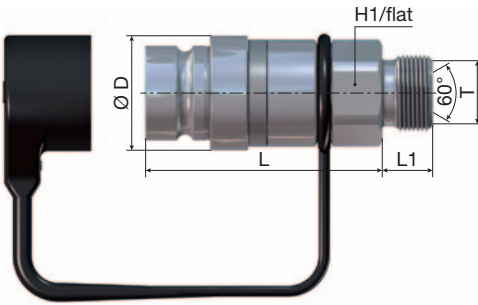
Plug part numbers

Female thread plugs



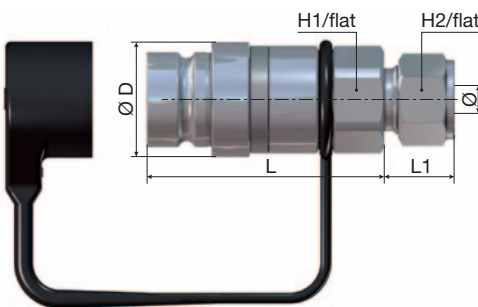
Models	Threads T	Part numbers	Ø D	Sizes L	H1/flat
NCB 04	KEE G 1/4	NCB 04.7101/IC	23	55.5	19
	NPT 1/4	NCB 04.7201/IC	23	55.5	19
	Rc 1/4	NCB 04.7111/IC	23	55.5	19
	UN 7/16 - 20	NCB 04.7311/IC	23	55.5	19
NCB 08	KEE G 1/2	NCB 08.7103/IC	32	65.5	27
	NPT 1/2	NCB 08.7203/IC	32	65.5	27
	Rc 1/2	NCB 08.7113/IC	32	65.5	27
	UN 9/16 - 18	NCB 08.7314/IC	32	65.5	27
NCB 12	KEE G 3/4	NCB 12.7104/IC	42	75	32
	NPT 3/4	NCB 12.7204/IC	42	75	32
	Rc 3/4	NCB 12.7114/IC	42	75	32
	UN 7/8 - 14	NCB 12.7322/IC	42	75	32
NCB 20	KEE G 1	NCB 20.7105/IC	58	96	41
	NPT 1	NCB 20.7205/IC	58	96	41
	Rc 1	NCB 20.7115/IC	58	96	41

Male thread plugs with cone 60°



Models	Threads T	Part numbers	Ø D	Sizes L	L1	H1/flat
NCB 04	KEE G 1/4	NCB 04.7151/IC	23	55.5	11	19
NCB 08	KEE G 1/2	NCB 08.7153/IC	32	65.5	14	27
NCB 12	KEE G 3/4	NCB 12.7154/IC	42	75	16	32
NCB 20	KEE G 1	NCB 20.7155/IC	58	96	20	41

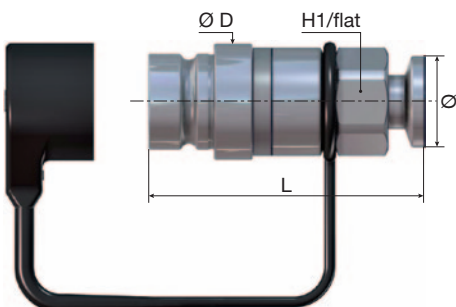
Plugs for calibrated* stainless steel tubing



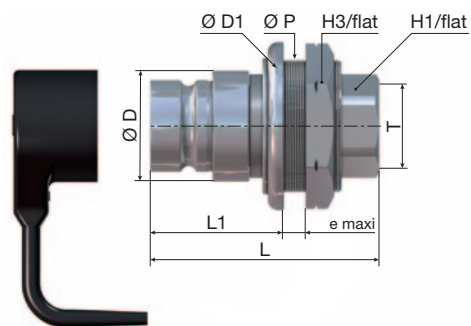
Models	Outer tubing Ø	Part numbers	Ø D	L	L1	Sizes H1/flat	H2/flat
NCB 04	8 mm	NCB 04.7768/IC	23	55.5	17	19	17
NCB 08	12 mm	NCB 08.7772/IC	32	65.5	19.5	27	22

*Features of stainless steel tubing: in compliance with ISO 1127 standard class D4 and ASTM A269 class 1 (Assembly instructions RV 1300 100).

Clamp plugs

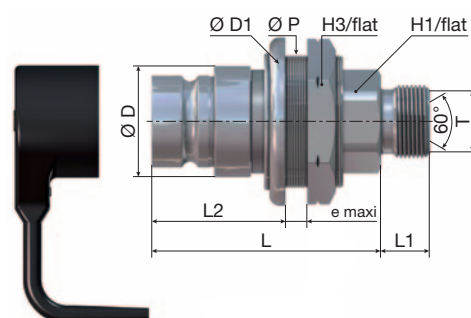


Models	Clamp Ø	Part numbers	Ø D	Sizes L	H1/flat
NCB 04	25 mm	NCB 04.7025	23	65.5	19
NCB 08	25 mm	NCB 08.7025	32	75.5	28
	50 mm	NCB 08.7050	32	74.5	28
NCB 12	50 mm	NCB 12.7050	42	84.5	32
NCB 20	50 mm	NCB 20.7050	58	108	41



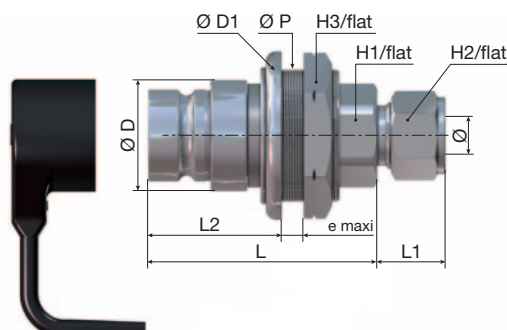
Panel mount female thread plugs

Models	Threads T	Part numbers	Sizes							
			Ø D	Ø D1	L	L1	H1/flat	H3/flat	Ø P	e maxi.
NCB 04	G 1/4	NCB 04.5101/IC	23	37	55.5	35	19	32	28	6
	NPT 1/4	NCB 04.5201/IC	23	37	55.5	35	19	32	28	6
	Rc 1/4	NCB 04.5111/IC	23	37	55.5	35	19	32	28	6
	UN 7/16 - 20	NCB 04.5311/IC	23	37	55.5	35	19	32	28	6
NCB 08	G 1/2	NCB 08.5103/IC	32	48	65.5	38	27	41	38	9
	NPT 1/2	NCB 08.5203/IC	32	48	65.5	38	27	41	38	9
	Rc 1/2	NCB 08.5113/IC	32	48	65.5	38	27	41	38	9
	UN 9/16 - 18	NCB 08.5314/IC	32	48	65.5	38	27	41	38	9
NCB 12	G 3/4	NCB 12.5104/IC	42	60	75	45	32	55	50	9
	NPT 3/4	NCB 12.5204/IC	42	60	75	45	32	55	50	9
	Rc 3/4	NCB 12.5114/IC	42	60	75	45	32	55	50	9
	UN 7/8 - 14	NCB 12.5322/IC	42	60	75	45	32	55	50	9



Panel mount male thread cone 60° plugs

Models	Threads T	Part numbers	Sizes								
			Ø D	Ø D1	L	L1	L2	H1/flat	H3/flat	Ø P	e maxi.
NCB 04	G 1/4	NCB 04.5151/IC	23	37	55.5	11	35	19	32	28	6
NCB 08	G 1/2	NCB 08.5153/IC	32	48	65.5	14	38	27	41	38	9
NCB 12	G 3/4	NCB 12.5154/IC	42	60	75	16	45	32	55	50	9



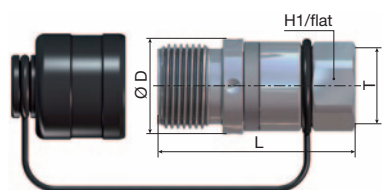
Panel mount plugs for calibrated* stainless steel tubing

Models	Outer tubing Ø	Part numbers	Sizes									
			Ø D	Ø D1	L	L1	L2	H1/flat	H2/flat	H3/flat	Ø P	e maxi.
NCB 04	8 mm	NCB 04.5768/IC	23	37	72.5	17	35	19	17	32	28	6
NCB 08	12 mm	NCB 08.5772/IC	32	48	65.5	19.5	38	27	22	41	38	9

*Features of stainless steel tubing: in compliance with ISO 1127 standard class D4 and ASTM A269 class 1 (Assembly instructions RV 1300 100).

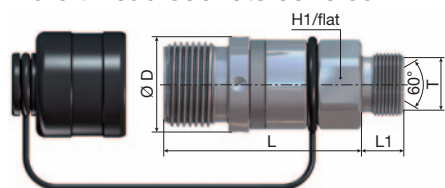
Sockets to be screwed

Female thread sockets



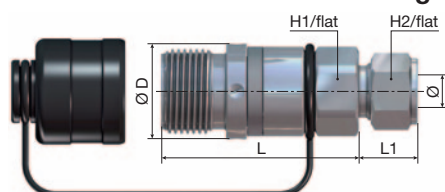
Models	Threads T	Part numbers	Ø D	Sizes L	H1/flat
NCB 08	☞ G 1/2	NCB 08.1103/IC/VR	32	65.5	27
	Rc1/2	NCB 08.1113/IC/VR	32	65.5	27
	NPT 1/2	NCB 08.1203/IC/VR	32	65.5	27
	UN 9/16 - 18	NCB 08.1314/IC/VR	32	65.5	27
NCB 12	☞ G 3/4	NCB 12.1104/IC/VR	43	75	32
	NPT 3/4	NCB 12.1204/IC/VR	43	75	32
	Rc 3/4	NCB 12.1114/IC/VR	43	75	32
	UN 7/8 - 14	NCB 12.1322/IC/VR	43	75	32
NCB 20	☞ G 1	NCB 20.1105/IC/VR	61	96	41
	NPT 1	NCB 20.1205/IC/VR	61	96	41
	Rc1	NCB 20.1115/IC/VR	61	96	41

Male thread sockets cone 60°



Models	Threads T	Part numbers	Ø D	Sizes L	L1	H1/flat
NCB 08	☞ G 1/2	NCB 08.1153/IC/VR	32	65.5	14	27
NCB 12	☞ G 3/4	NCB 12.1154/IC/VR	43	75	16	32
NCB 20	☞ G 1	NCB 20.1155/IC/VR	61	96	20	41

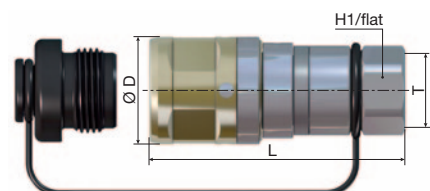
Sockets for stainless steel tubing



Models	Outer tubing Ø	Part numbers	Ø D	L	L1	H1/flat	H2/flat
NCB 08	12 mm	NCB 08.1772/IC/VR	32	85	19.5	27	22

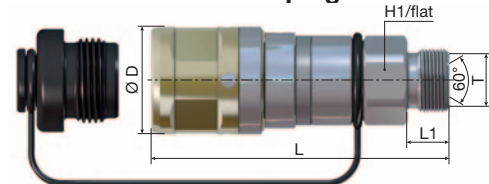
Plugs to be screwed

Female thread plugs



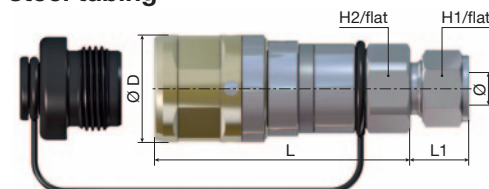
Models	Threads T	Part numbers	Ø D	Sizes L	H1/flat
NCB 08	☞ G 1/2	NCB 08.7103/IC/VR	35.5	84.5	27
	NPT 1/2	NCB 08.7203/IC/VR	35.5	84.5	27
	Rc1/2	NCB 08.7113/IC/VR	35.5	84.5	27
	UN 9/16 - 18	NCB 08.7314/IC/VR	35.5	84.5	27
NCB 12	☞ G 3/4	NCB 12.7104/IC/VR	46.5	94.5	32
	NPT 3/4	NCB 12.7204/IC/VR	46.5	94.5	32
	Rc 3/4	NCB 12.7114/IC/VR	46.5	94.5	32
	UN 7/8 - 14	NCB 12.7322/IC/VR	46.5	94.5	32
NCB 20	☞ G 1	NCB 20.7105/IC/VR	64.5	117	41
	NPT 1	NCB 20.7205/IC/VR	64.5	117	41
	Rc1	NCB 20.7115/IC/VR	64.5	117	41

Male thread cone 60° plug



Models	Threads T	Part numbers	Ø D	Sizes L	L1	H1/flat
NCB 08	☞ G 1/2	NCB 08.7153/IC/VR	35.5	65.5	14	27
NCB 12	☞ G 3/4	NCB 12.7154/IC/VR	46.5	94.5	16	32
NCB 20	☞ G 1	NCB 20.7155/IC/VR	64.5	117	20	41

Plugs for calibrated* stainless steel tubing



Models	Outer tubing Ø	Part numbers	Ø D	L	L1	H1/flat	H2/flat
NCB 08	12 mm	NCB 08.7772/IC/VR	35.5	84.5	19.5	22	27

*Features of stainless steel tubing: in compliance with ISO 1127 standard class D4 and ASTM A269 class 1 (Assembly instructions RV 1300 100).

For contact details: www.staubli.com/connectors/contacts



Global presence of the Stäubli Group

- Stäubli units
- Agents

International sales coordination

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www.staubli.com

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