

FAST MOVING TECHNOLOGY

STÄUBLI

Quick-release couplings NCB

All fluid



Reliable and
versatile connections
for all industry sectors





Visual identification

To ensure clear identification of the different circuits, we can offer red or blue sleeves for the operator's ease.

Compatible with the SCB range

The new NCB range is fully compatible with the previous SCB range, which enables our customers to interchange with their existing connectors and only replace them as required.

Flush-face technology

Stäubli's flush-face technology guarantees clean connection and disconnection, without spillage. It's anti-pollution features ensures no pollution of the circuits or the environment.

Locking options

Three locking versions are available:

- Ball locking system (standard option)
- Safety locking system (VS option)
- Screw locking system (VR option for higher pressure levels).

Easy cleaning

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

Corrosion resistance

The NCB range is constructed from mainly 316L stainless steel.

A full range

NCB products are available in four nominal bore diameters: 04, 08, 12 and 20 mm making them compatible with a wide variety of assemblies, as well as being easily adaptable to pre-existing system interfaces (bulkheads, threads etc.). Different seal types are also available.

Traceability of material

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

Industries

- Chemical
- Agri-food
- Railway
- Automotive
- Maritime
- Nuclear
- Electronics cooling
- Plastics
- Oil and gas, etc.

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 specifications

Construction

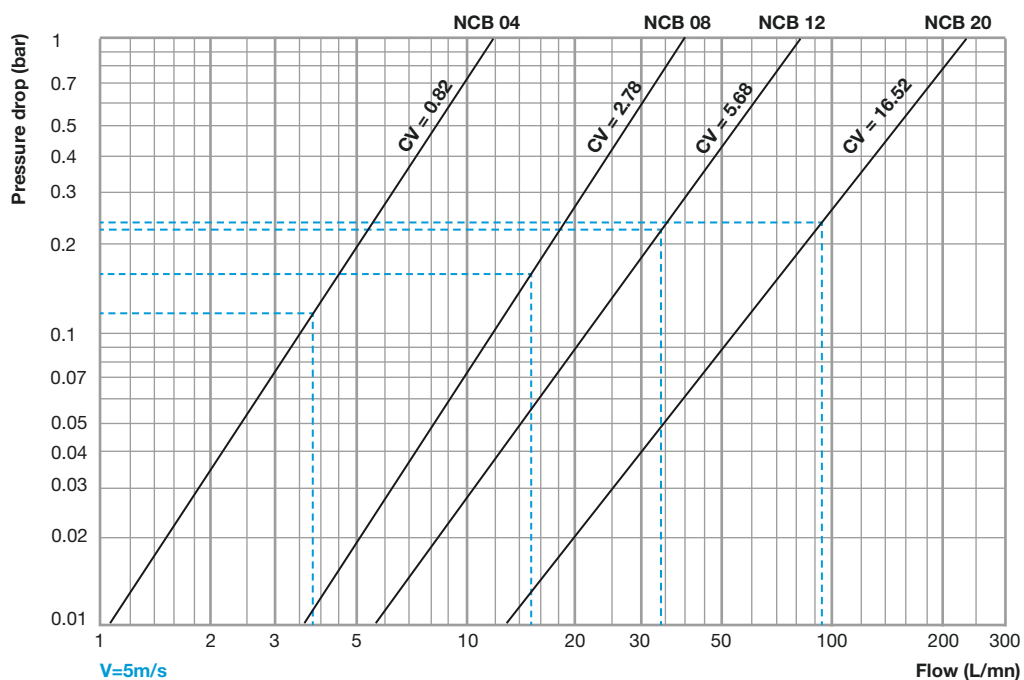
- Mainly stainless steel 316 series.
Please contact us for further information.
- Sealing
 - Nitrile seal (NBR), as standard
 - Other seal materials available, please see page 6
- Identification sleeves (available in red or blue), are made of light anodised alloy
- Protective caps:
 - On the sockets: POM.H
 - On the plugs: Chloroprene or POM.H

Recommendations for use

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



Hydraulic flow rate / pressure drop charts



Direction of flow:
Plug → Socket

Test conditions:

- Water
- Density : 998 kg/m³
- Viscosity : 1,08 cSt

NCB 04 & NCB 08

			NCB 04	NCB 08	
Bore diameters (mm)			4	8	
Bore section (mm ²)			12.5	50	
Version			Automatic	Automatic	Screw locking
Maximum allowable pressure			160	80	160
PS (bar)					
With JS3 seal			50	50	50
Vacuum retention in connected and disconnected positions (Ncm ³ /s)			1.10 ⁻³	1.10 ⁻³	1.10 ⁻³
Minimum and maximum allowable temperatures TS (°C), without cap, according to seal type	Standard nitrile	(NBR)	- 15°C to + 100°C	- 15°C to + 100°C	
	Fluorocarbon	(JV)	- 10°C to + 200°C	- 10°C to + 200°C	
	Ethylene Propylene	(JE)	- 20°C to + 150°C	- 20°C to + 150°C	
	Perfluoroelastomer	(JK)	0°C to + 250°C	0°C to + 250°C	
	Fluorosilicone	(JS3)	- 45°C to + 175°C	- 45°C to + 175°C	
Minimum and maximum allowable temperatures TS (°C) for using cap			- 20°C to + 100°C	- 20°C to + 100°C	
Loss of fluid on disconnection (cm ³)			0.0035	0.0116	0.0116

NCB 12 & NCB 20

			NCB 12		NCB 20	
Bore diameters (mm)			12		20	
Bore section (mm ²)			113		314	
Version			Automatic	Screw locking	Automatic	Screw locking
Maximum allowable pressure			80	160	100	160
PS (bar)						
With JS3 seal			50	50	50	50
Vacuum retention in connected and disconnected positions (Ncm ³ /s)			1.10 ⁻³	1.10 ⁻³	-	1.10 ⁻³
Minimum and maximum allowable temperatures TS (°C), without cap, according to seal type	Standard nitrile	(NBR)	- 15°C to + 100°C		- 15°C to + 100°C	
	Fluorocarbon	(JV)	- 10°C to + 200°C		- 10°C to + 200°C	
	Ethylene Propylene	(JE)	- 20°C to + 150°C		- 20°C to + 150°C	
	Perfluoroelastomer	(JK)	0°C to + 250°C		0°C to + 250°C	
	Fluorosilicone	(JS3)	- 45°C to + 175°C		- 45°C to + 175°C	
Minimum and maximum allowable temperatures TS (°C) for using cap			- 20°C to + 100°C		- 20°C to + 100°C	
Loss of fluid on disconnection (cm ³)			0.0200	0.0200	0.0500	0.2300

Part Numbers & options

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

Example of a complete part number with options:

NCBXX.XXX / IC / VS / JV / KR

1	2	3	4
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*VS option is unavailable on diameter 20mm nominal bore.

**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.

****RD option unavailable on NCB 04, NCB 04/VR and NCB 20/VR.

1	Standard part number with nitrile seal	(pages 7 to 11)
2	Type of locking	
	Safety locking*	VS
	Screw locking	VR
3	Seal type (except for nitrile)	
	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 panel mounted NCB20)	
	Red	KR
	Blue	KB
5	Type of spring	
	Hard spring ****	RD



Sealing kits KES (to be ordered separately)

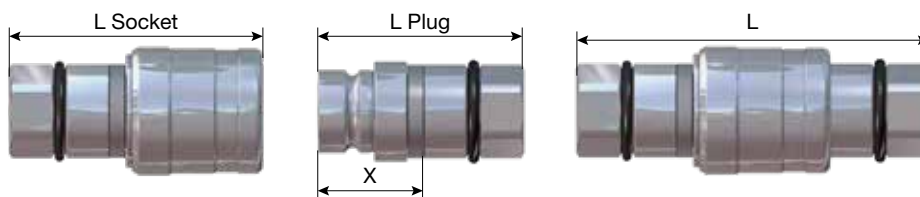


KES sealing kits consist of a retaining ring and O-ring to create a perfect seal between the socket or plug and its base.

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

Select the specific ring and seal materials for your application using our brochure: KES RP0030101.

Socket part numbers



Length of the socket/plug combination in the couple position:

$$L = (L \text{ Socket} + L \text{ plug}) - X$$

Model	NCB 04	NCB 08	NCB 12	NCB 20
Length X (mm)	13.7	17.8	22.6	30.3

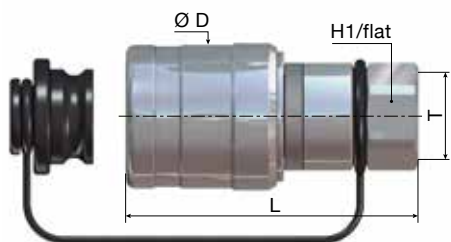
Protective dust caps

must be ordered separately (supplied if an order is placed for a plug or a socket)



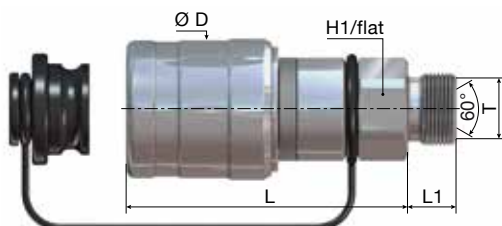
PART NUMBERS

Female thread sockets



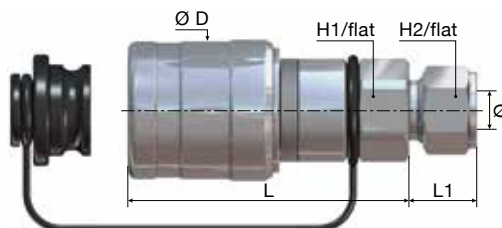
Models	Thread T	Sizes			Part numbers
		Ø D	L	H1/flat	
NCB 04	KEC G 1/4	31	65	19	NCB 04.1101/IC
	NPT 1/4	31	65	19	NCB 04.1201/IC
	Rc 1/4	31	65	19	NCB 04.1111/IC
	UN 7/16 - 20	31	65	19	NCB 04.1311/IC
NCB 08	KEC G 1/2	40.5	81	27	NCB 08.1103/IC
	NPT 1/2	40.5	81	27	NCB 08.1203/IC
	Rc 1/2	40.5	81	27	NCB 08.1113/IC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

Male thread sockets cone 60°



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

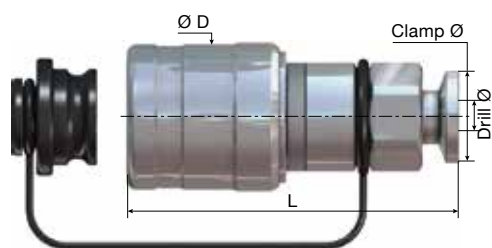
Sockets for calibrated* stainless steel tubing



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

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

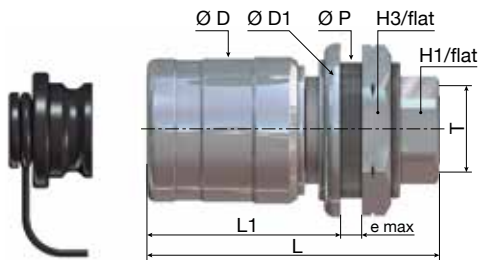
Clamp sockets



Models	Clamp Ø	Drill Ø	Sizes		Part numbers
			Ø D	L	
NCB 04	25 mm	4.57 mm	31	75	NCB 04.1025/IC
NCB 08	25 mm	10.3 mm	40.5	91	NCB 08.1025/IC
	50 mm	18.1 mm	40.5	90	NCB 08.1050/IC
NCB 12	25 mm	14 mm	52	100.4	NCB 12.1025/IC
	50 mm	18.1 mm	52	100	NCB 12.1050/IC
NCB 20	50 mm	23.7 mm	69	124.5	NCB 20.1050/IC

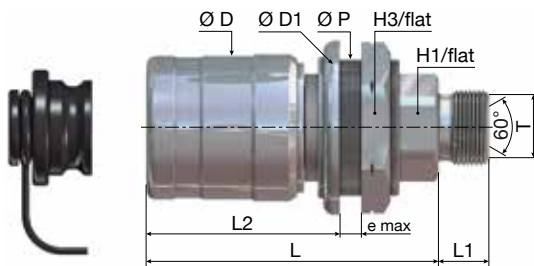
PART NUMBERS

Panel mount female thread sockets



Models	Thread T	Sizes								Part numbers
		Ø D	Ø D1	L	L1	H1/flat	H2/flat	Ø P	e max	
NCB 04	 G 1/4	31	37	65	44.5	19	32	28	6	NCB 04.2101/IC
	NPT 1/4	31	37	65	44.5	19	32	28	6	NCB 04.2201/IC
	Rc 1/4	31	37	65	44.5	19	32	28	6	NCB 04.2111/IC
	UN 7/16 - 20	31	37	65	44.5	19	32	28	6	NCB 04.2311/IC
NCB 08	 G 1/2	40.5	48	81	53.5	27	41	38	9	NCB 08.2103/IC
	NPT 1/2	40.5	48	81	53.5	27	41	38	9	NCB 08.2203/IC
	Rc 1/2	40.5	48	81	53.5	27	41	38	9	NCB 08.2113/IC
	UN 9/16 - 18	40.5	48	81	53.5	27	41	38	9	NCB 08.2314/IC
NCB 12	 G 3/4	52	60	90.5	60	32	55	50	9	NCB 12.2104/IC
	NPT 3/4	52	60	90.5	60	32	55	50	9	NCB 12.2204/IC
	Rc 3/4	52	60	90.5	60	32	55	50	9	NCB 12.2114/IC
	UN 7/8 - 14	52	60	90.5	60	32	55	50	9	NCB 12.2322/IC

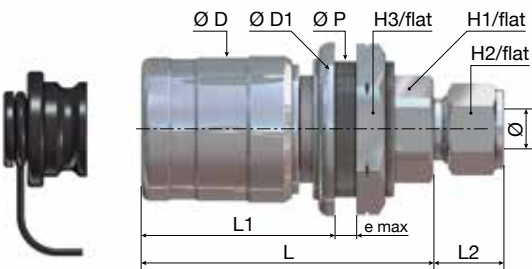
Panel mount male thread cone 60° sockets



Models	Thread T	Sizes									Part numbers
		Ø D	Ø D1	L	L1	L2	H1/flat	H2/flat	Ø P	e max	
NCB 04	 G 1/4	31	37	65	11	44.5	19	32	28	6	NCB 04.2151/IC
NCB 08	 G 1/2	40.5	48	81	14	53.5	27	41	38	9	NCB 08.2153/IC
NCB 12	 G 3/4	52	60	90.5	16	60	32	55	50	9	NCB 12.2154/IC

PART NUMBERS

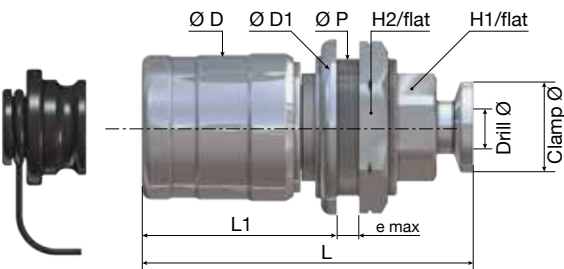
Panel mount sockets for calibrated* stainless steel tubing



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

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

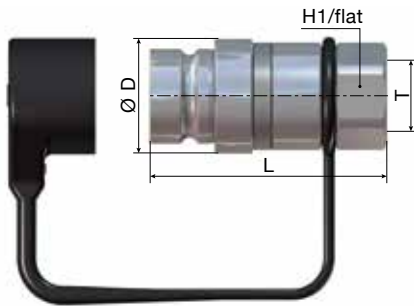
Panel mount sockets clamp profile



Models	Clamp Ø	Drill Ø	Sizes								Part numbers
			Ø D	Ø D1	L	L1	H1/flat	H2/flat	Ø P	e max	
NCB 04	25	4.57	31	37	75	44.5	19	32	28	6	NCB 04.2025/IC
NCB 08	25	10.3	40.5	48	91	53.5	27	41	38	9	NCB 08.2025/IC
NCB 12	25	14	52	60	100.5	60	32	55	50	9	NCB 12.2025/IC

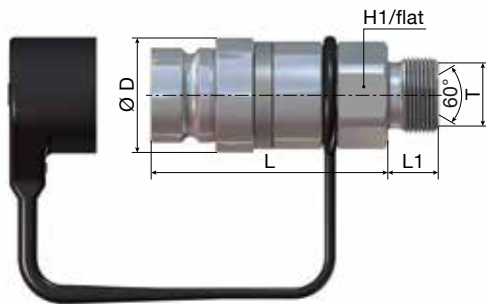
PART NUMBERS

Female thread plugs



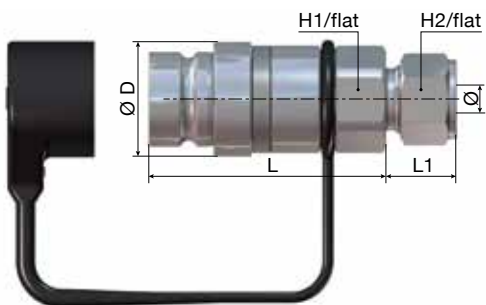
Models	Thread T	Sizes			Part numbers
		Ø D	L	H1/flat	
NCB 04	 G 1/4	23	55.5	19	NCB 04.7101/IC
	NPT 1/4	23	55.5	19	NCB 04.7201/IC
	Rc 1/4	23	55.5	19	NCB 04.7111/IC
	UN 7/16 - 20	23	55.5	19	NCB 04.7311/IC
NCB 08	 G 1/2	32	65.5	27	NCB 08.7103/IC
	NPT 1/2	32	65.5	27	NCB 08.7203/IC
	Rc 1/2	32	65.5	27	NCB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

Male thread plugs with cone 60°



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

Plugs for calibrated* stainless steel tubing

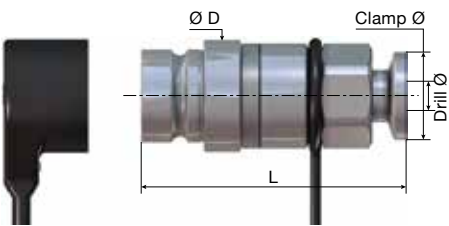


Models	Outer tubing Ø	Sizes					Part numbers
		Ø D	L	L1	H1/flat	H2/flat	
NCB 04	8 mm	23	55.5	17	19	17	NCB 04.7768/IC
NCB 08	12 mm	32	65.5	19.5	27	22	NCB 08.7772/IC

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

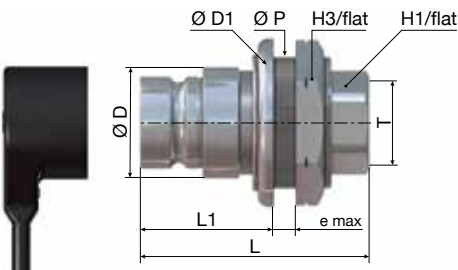
PART NUMBERS

Clamp plugs



Models	Clamp Ø	Drill Ø	Sizes		Part numbers
			Ø D	L	
NCB 04	25 mm	4.57 mm	23	65.5	NCB 04.7025/IC
NCB 08	25 mm	10.3 mm	32	75.5	NCB 08.7025/IC
	50 mm	18.1 mm	32	74.5	NCB 08.7050/IC
NCB 12	25 mm	14 mm	42	85	NCB 12.7025/IC
	50 mm	18.1 mm	42	84.5	NCB 12.7050/IC
NCB 20	50 mm	23.7 mm	58	108	NCB 20.7050/IC

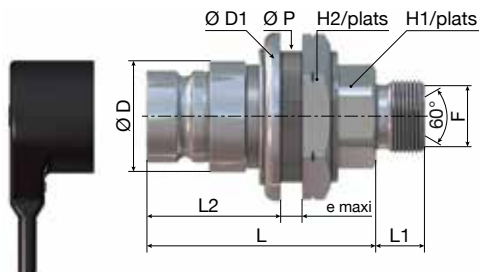
Panel mount female thread plugs



Models	Thread T	Sizes								Part numbers
		Ø D	Ø D1	L	L1	H1/flat	H2/flat	Ø P	e max	
NCB 04	 G 1/4	23	37	55.5	35	19	32	28	6	NCB 04.5101/IC
	NPT 1/4	23	37	55.5	35	19	32	28	6	NCB 04.5201/IC
	Rc 1/4	23	37	55.5	35	19	32	28	6	NCB 04.5111/IC
	UN 7/16 - 20	23	37	55.5	35	19	32	28	6	NCB 04.5311/IC
NCB 08	 G 1/2	32	48	65.5	38	27	41	38	9	NCB 08.5103/IC
	NPT 1/2	32	48	65.5	38	27	41	38	9	NCB 08.5203/IC
	Rc 1/2	32	48	65.5	38	27	41	38	9	NCB 08.5113/IC
	UN 9/16 - 18	32	48	65.5	38	27	41	38	9	NCB 08.5314/IC
NCB 12	 G 3/4	42	60	75	45	32	55	50	9	NCB 12.5104/IC
	NPT 3/4	42	60	75	45	32	55	50	9	NCB 12.5204/IC
	Rc 3/4	42	60	75	45	32	55	50	9	NCB 12.5114/IC
	UN 7/8 - 14	42	60	75	45	32	55	50	9	NCB 12.5322/IC

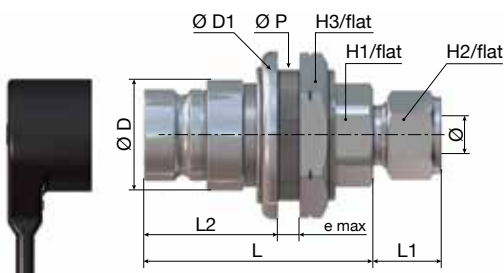
PART NUMBERS

Panel mount male thread cone 60° plugs



Models	Thread T	Sizes									Part numbers
		Ø D	Ø D1	L	L1	L2	H1/flat	H2/flat	Ø P	e max	
NCB 04	 G 1/4	23	37	55.5	11	35	19	32	28	6	NCB 04.5151/IC
NCB 08	 G 1/2	32	48	65.5	14	38	27	41	38	9	NCB 08.5153/IC
NCB 12	 G 3/4	42	60	75	16	45	32	55	50	9	NCB 12.5154/IC

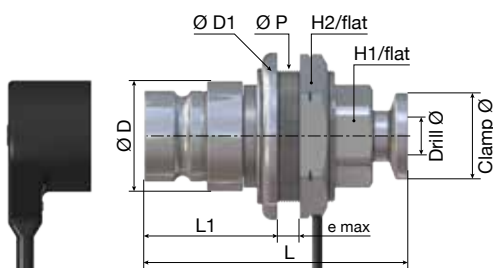
Panel mount plugs for calibrated* stainless steel tubing



Models	Outer tubing Ø	Sizes										Part numbers
		Ø D	Ø D1	L	L1	L2	H1/flat	H2/flat	H3/flat	Ø P	e max	
NCB 04	8 mm	23	37	55.5	17	35	19	17	32	28	6	NCB 04.5768/IC
NCB 08	12 mm	32	48	65.5	19.5	38	27	22	41	38	9	NCB 08.5772/IC

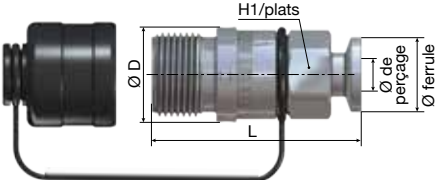
* Features of stainless steel tubing: in compliance with ISO 1127 standard class D4 and ASTM A269 class 1 (Assembly instructions RV 1300 100).

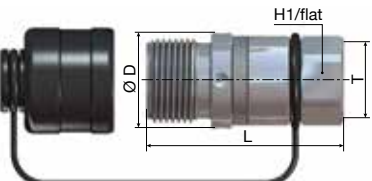
Panel mount plug clamp profile

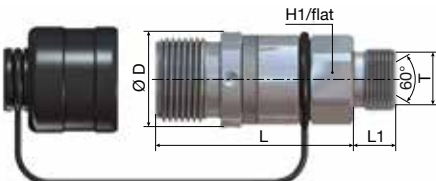


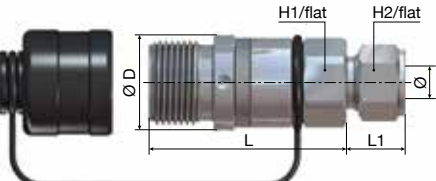
Models	Clamp Ø	Drill Ø	Sizes								Part numbers
			Ø D	Ø D1	L	L1	H1/flat	H2/flat	Ø P	e max	
NCB 04	25	4.57	23	37	65.5	35	19	32	28	6	NCB 04.5025/IC
NCB 08	25	10.3	32	48	75.5	38	27	41	38	9	NCB 08.5025/IC
NCB 12	25	14	42	60	85	45	32	55	50	9	NCB 12.5025/IC

PART NUMBERS

SOCKETS TO BE SCREWED	Models	Clamp Ø	Drill Ø	Sizes			Part numbers
				Ø D	L	H1/flat	
Clamp sockets 	NCB 08	25	10.3	32	75.5	27	NCB 08.1025/IC/VR
		50	18.1	32	74.5	27	NCB 08.1050/IC/VR
	NCB 12	25	14	43	85	32	NCB 12.1025/IC/VR
		50	18.1	43	84.5	32	NCB 12.1050/IC/VR
	NCB 20	50	23.7	61	108	41	NCB 20.1050/IC/VR

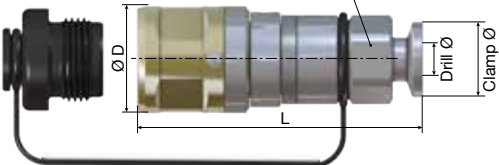
Female thread sockets	Models	Thread T	Sizes			Part numbers
			Ø D	L	H1/flat	
	NCB 08	 G 1/2	32	65.5	27	NCB 08.1103/IC/VR
		Rc 1/2	32	65.5	27	NCB 08.1113/IC/VR
		NPT 1/2	32	65.5	27	NCB 08.1203/IC/VR
		UN 9/16 - 18	32	65.5	27	NCB 08.1314/IC/VR
	NCB 12	 G 3/4	43	75	32	NCB 12.1104/IC/VR
		NPT 3/4	43	75	32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

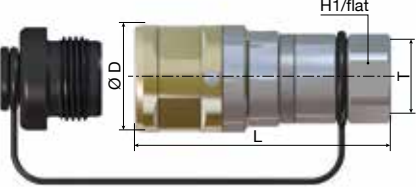
Male thread sockets cone 60°	Models	Thread T	Sizes				Part numbers
			Ø D	L	L1	H1/flat	
	NCB 08	 G 1/2	32	65.5	14	27	NCB 08.1153/IC/VR
	NCB 12	 G 3/4	43	75	16	32	NCB 12.1154/IC/VR
	NCB 20	 G 1	61	96	20	41	NCB 20.1155/IC/VR

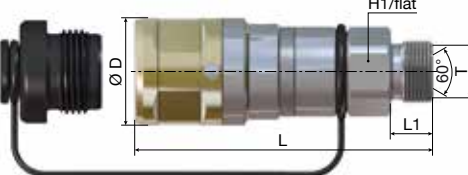
Sockets for calibrated* stainless steel tubing	Models	Outer tubing Ø	Sizes					Part numbers
			Ø D	L	L1	H1/flat	H2/flat	
	NCB 08	12 mm	32	85	19.5	27	22	NCB 08.1772/IC/VR

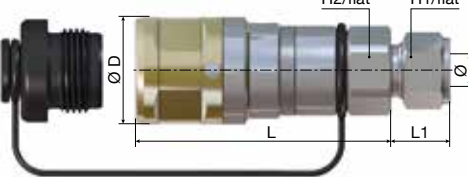
* Features of stainless steel tubing: in compliance with ISO 1127 standard class D4 and ASTM A269 class 1 (Assembly instructions RV 1300 100).

PART NUMBERS

PLUGS TO BE SCREWED	Models	Clamp Ø	Drill Ø	Sizes			Part numbers
				Ø D	L	H1/flat	
Clamp plug 	NCB 08	25	10.3	35.5	94.5	27	NCB 08.7025/IC/VR
		50	18.1	35.5	93.5	27	NCB 08.7050/IC/VR
	NCB 12	25	14	46.5	104.5	32	NCB 12.7025/IC/VR
		50	18.1	46.5	104	32	NCB 12.7050/IC/VR
	NCB 20	50	23.7	64.5	129	41	NCB 20.7050/IC/VR

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

Male thread plugs with cone 60°	Models	Thread T	Sizes				Part numbers
			Ø D	L	L1	H1/flat	
	NCB 08	Ⓚ G 1/2	35.5	84.5	14	27	NCB 08.7153/IC/VR
	NCB 12	Ⓚ G 3/4	46.5	94.5	16	32	NCB 12.7154/IC/VR
	NCB 20	Ⓚ G 1	64.5	117	20	41	NCB 20.7155/IC/VR

Plugs for calibrated* stainless steel tubing	Models	Outer tubing Ø	Sizes					Part numbers
			Ø D	L	L1	H1/flat	H2/flat	
	NCB 08	12 mm	35.5	84.5	19.5	22	27	NCB 08.7772/IC/VR

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



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