

FAST MOVING TECHNOLOGY

STÄUBLI

CBI quick-release couplings

Cooling | Temperature regulation



Non-spill flat-face pollution preventing technology...





... ensures seal integrity

Applications

- Cold water, water glycol, hot water, steam
- Mineral or synthetic heat transfer oil
- Lubricating oil
- Gas circuits: argon, nitrogen, helium, etc.

Automatic locking and compact design

CBI provides ease of handling for the operator.

A concept that is suitable for:

- Blind connections
- Repeated connections

Spill-free

Ensures the safety of operators, as well as protection for tools, production and workplace.

High mechanical strength

The robust construction provides the CBI with high strength to withstand mechanical stresses (vibrations, oscillations, etc).

Option to install plug into recessed pocket

(see page 6).


Flat-face design prevents pollution

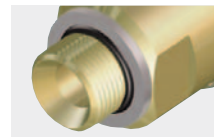
The integrity of fluids and gases is guaranteed. No pollution enters your circuit.

Ease of connection

Front sealing is provided by a seal fitted into the back adapter **on all cylindrical male plugs**.



KES sealing kits are available **on all cylindrical BSP thread sockets** (see pages 7, 8 and 11). 



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 data



	CBI 03	CBI 06	CBI 09	CBI 12	CBI 16	CBI 25
Nominal diameter DN (mm)	3	6	9	12	16	25
Maximum allowable pressure PS (bar)	50	50	50	50	50	50
Shut-off	double					

Tightness

Seals:

- Nitrile (NBR)
- Fluorocarbon (FPM)
- Ethylene-Propylene (EPDM)*
- Perfluoroelastomer (FFKM) in the fluid path

Other seal materials available on request.

Construction

Standard version: brass and stainless steel.

BF option: all the parts in the fluid path are constructed in stainless steel. See part number tables.

Socket dust cap: aluminium and chloroprene (CR)

Plug dust cap: chloroprene (CR)

Minimum and maximum allowable temperatures without dust cap

Type of flow	Type of seal	Minimum and maximum allowable temperatures TS (°C)
Cold or hot water, hydraulic and mineral oils	Nitrile (NBR)	+15 to +100
Heat transfer oil	Fluorocarbon (FPM)	+10 to +200
	Perfluoroelastomer (FFKM)	0 to +250
Water glycol	Ethylene-Propylene (EPDM) *	-20 to +150
Hot water and steam	Ethylene-Propylene (EPDM) *	-20 to +200

* **Important!** Never use Ethylene-Propylene seals with fluids of mineral origin (oil, fat etc...).

Minimum and maximum allowable temperatures TS for dust caps in chloroprene (CR): -20 to +100 °C

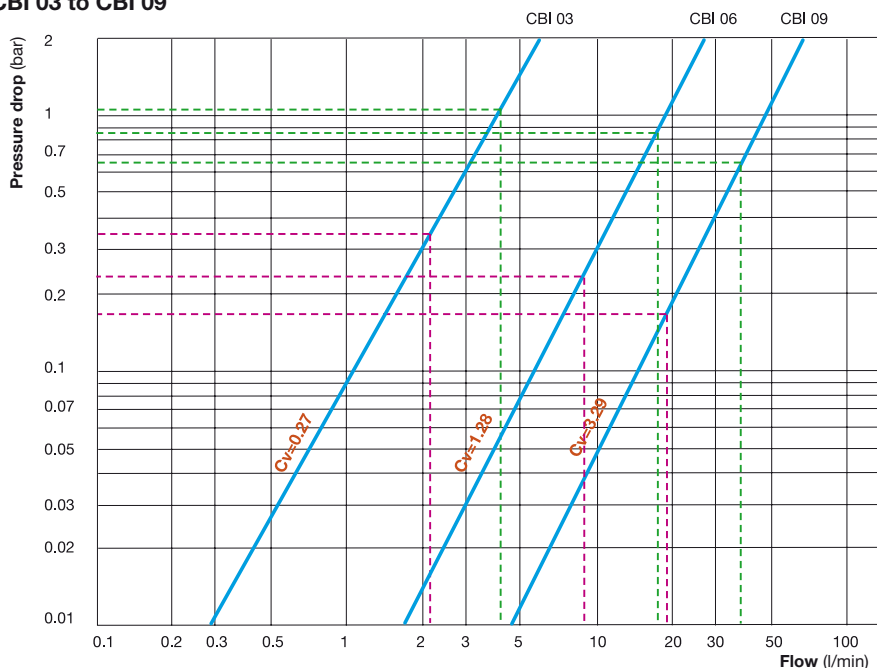
For other temperatures, please contact us for more information.

Hydraulic flow rate / pressure drop chart

Speed (m/s)	Flow (l/min)					
	CBI 03	CBI 06	CBI 09	CBI 12	CBI 16	CBI 25
5	2	8.5	19	34	60.5	147
10	4	17	38	68	121	294

- - - Speed of flow less than or equal to 5 m/s: all seals
- - - Speed of flow between 5 and 10 m/s:
 - Nitrile and Fluorocarbon seals
 - temperatures ≤ 60 °C

CBI 03 to CBI 09

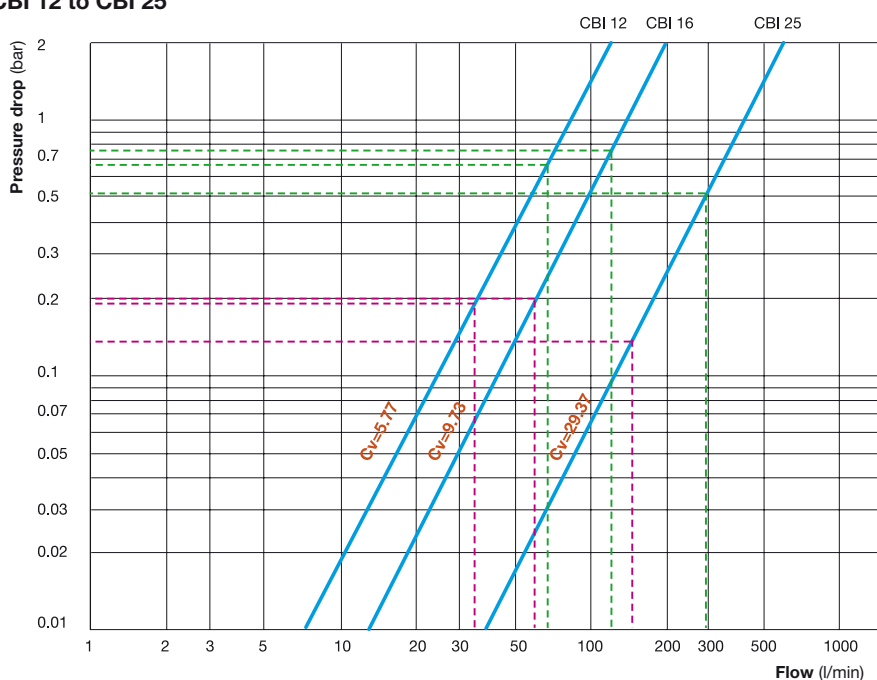


- V = 5 m/s - - -
- V = 10 m/s - - -

Test conditions:

- Fluid: water
- Direction of flow: plug → socket

CBI 12 to CBI 25

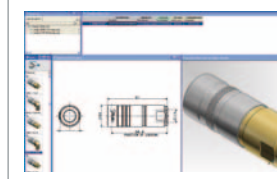


- V = 5 m/s - - -
- V = 10 m/s - - -

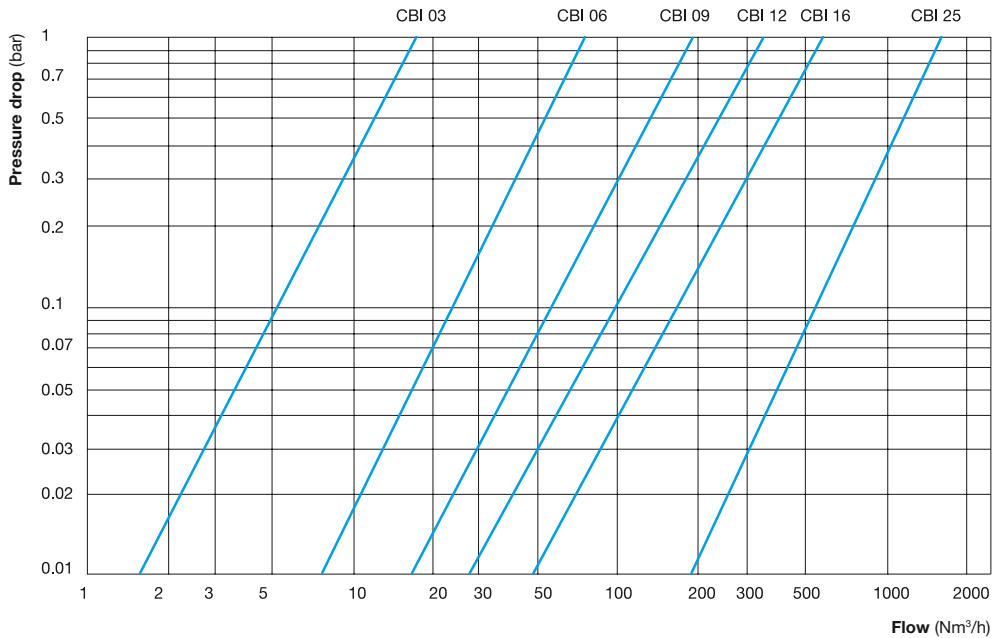
Test conditions:

- Fluid: water
- Direction of flow: plug → socket

CAD files available on request from our sales network.



Pneumatic flow rate / pressure drop charts



Test conditions:

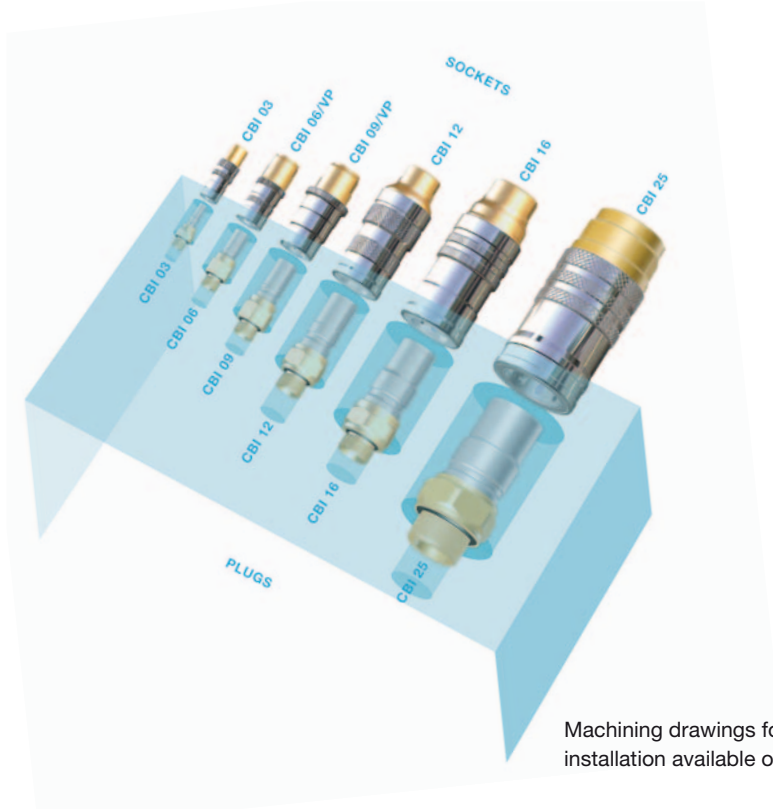
- Inlet pressure: 6 bar
- Direction of flow: plug → socket

Installation of plug into recessed pocket

Cylindrical male threaded plugs can be fully flush-fitted into a recessed pocket.

When recess mounting CBI 06 and 09

plugs, to improve grip on disconnection, it is essential to use the enhanced shoulder locking ring type CBI sockets.

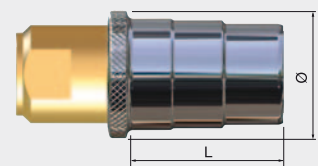


Machining drawings for recessed installation available on request

Enhanced shoulder locking ring type CBI 06 and CBI 09 sockets

Add the code VP to the CBI 06 or CBI 09 socket part number on pages 7 and 8.

Ex.: CBI 06.1101/IA/VP



Dimensions

CBI 06: Ø = 24 mm

L = 30 mm

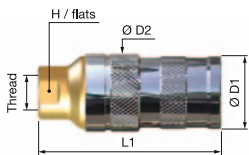
CBI 09: Ø = 36 mm

L = 43 mm

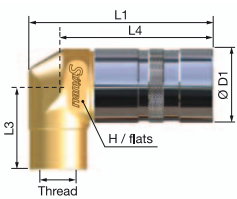
Part numbers

Sockets

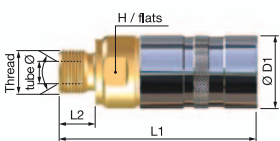
Designation	Model	Thread	Dimensions (mm)							Part numbers	
			Ø D1	Ø D2	L1	L2	L3	L4	H/flats	Standard	BF option
Female thread (not available for NPT thread)	CBI 03	G 1/8	15	17	48.5				13	CBI 03.1100/IA	CBI 03.1100/IA/BF
		NPT 1/8	15	17	46.5				13	CBI 03.1200/IA	CBI 03.1200/IA/BF
	CBI 06	G 1/4	22		61				20	CBI 06.1101/IA	CBI 06.1101/IA/BF
		G 3/8	22		65				20	CBI 06.1102/IA	CBI 06.1102/IA/BF
		NPT 1/4	22		61				17	CBI 06.1201/IA	CBI 06.1201/IA/BF
	CBI 09	Rc 1/4	22		61				20	CBI 06.1111/IA	
		G 3/8	30.5		75.5				24	CBI 09.1102/IA	CBI 09.1102/IA/BF
		NPT 3/8	30.5		75.5				24	CBI 09.1202/IA	CBI 09.1202/IA/BF
	CBI 12	G 1/2	30.5		79				24	CBI 09.1103/IA	
		NPT 1/2	30.5		79				24	CBI 09.1203/IA	
	CBI 16	G 1/2	41	44	103				27	CBI 12.1103/IA	CBI 12.1103/IA/BF
		NPT 1/2	41	44	103				27	CBI 12.1203/IA	CBI 12.1203/IA/BF
	CBI 25	G 3/4	53	53.5	129.5				36	CBI 16.1104/IA	CBI 16.1104/IA/BF
		NPT 3/4	53	53.5	128.5				36	CBI 16.1204/IA	CBI 16.1204/IA/BF
	CBI 25	G 1	66.5		148				55	CBI 25.1105/IA	
		G 1 1/4	66.5		141				55	CBI 25.1106/IA	
NPT 1		66.5		148				55	CBI 25.1205/IA		
NPT 1 1/4		66.5		141				55	CBI 25.1206/IA		



90° female thread (not available for NPT thread)	CBI 06	G 1/4			56.5		25	48	22	CBI 06.1101/IA/RE	
		NPT 1/4			56.5		24.5	48	22	CBI 06.1201/IA/RE	
	CBI 09	G 3/8			99.6		18	88.5	24	CBI 09.1102/IA/RE	




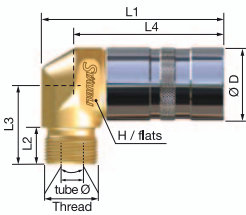
Male thread (not available for M 16 x 1.5 thread)	CBI 06	G 1/4 60° cone			61.5	11			20	CBI 06.1151/IA	CBI 06.1151/IA/BF
		G 3/8 60° cone			61	12			21	CBI 06.1152/IA	
		M16 x 1,5 24° cone for tube Ø 10 mm			59	11			20	CBI 06.1610/IA	
	CBI 09	G 3/8 60° cone			82	12			24	CBI 09.1152/IA	CBI 09.1152/IA/BF
		G 1/2 60° cone			84	14			24	CBI 09.1153/IA	
	CBI 12	G 1/2			109.3	14			27	CBI 12.1153/IA	CBI 12.1153/IA/BF
	CBI 16	G 3/4			134	16			32	CBI 16.1154/IA	
CBI 25	NPT 1 1/4			130	22.5			55	CBI 25.1256/IA		



Part numbers

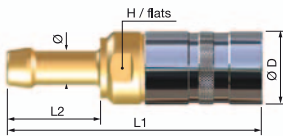
Sockets

Designation	Model	Thread or int. Ø	Dimensions (mm)						Part numbers
			Ø D	L1	L2	L3	L4	H/flats	Standard
90° male thread (not available for M 16 x 1.5 thread)		G 1/4 60° cone	22	56.5	11	44	48	22	CBI 06.1151/IA/RE
		G 3/8 60° cone	22	56.5	11	24.5	48	22	CBI 06.1152/IA/RE
		M16 x 1,5 24° cone for tube Ø 10 mm	22	56.5	11	24	48	22	CBI 06.1610/IA/RE
	CBI 09	G 3/8	30.5	99.6	12	38	88.5	21	CBI 09.1152/IA/RE



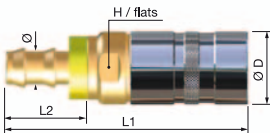
For rubber hose

CBI 06	Ø 10 mm		78.5	28			20	CBI 06.1810/IA
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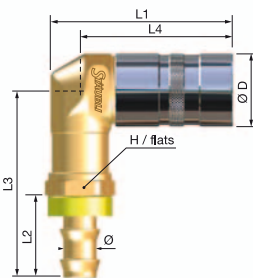
For self-locking hose

CBI 06	Ø 3/8"		74.5	23.5			20	CBI 06.1810/IA/CN
CBI 09	Ø 1/2"		115	28			22	CBI 09.1813/IA/CN




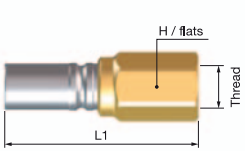
90° for self-locking hose

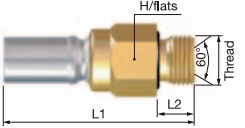
CBI 06	Ø 3/8"	56.5	23.5	56	48	19	22	CBI 06.1810/IA/CN/RE
CBI 09	Ø 1/2"	97	28	45	88	21	24	CBI 09.1813/IA/CN/RE

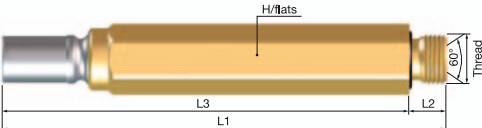


Part numbers

Plugs

Designation	Model	Thread	Dimensions (mm)				Part numbers	
			L1	L2	L3	H/flats	Standard	BF option
Female thread  	CBI 03	G 1/8	43.5			13	CBI 03.7100/IA	CBI 03.7100/IA/BF
		NPT 1/8	41.5			13	CBI 03.7200/IA	CBI 03.7200/IA/BF
	CBI 06	G 1/4	59			17	CBI 06.7101/IA	CBI 06.7101/IA/BF
		G 3/8	61			21	CBI 06.7102/IA	CBI 06.7102/IA/BF
	CBI 09	G 3/8	71			23	CBI 09.7102/IA	CBI 09.7102/IA/BF
	CBI 12	G 1/2	90			30	CBI 12.7103/IA	CBI 12.7103/IA/BF
		NPT 1/2	90			30	CBI 12.7203/IA	CBI 12.7203/IA/BF
	CBI 16	G 3/4	105			38	CBI 16.7104/IA	CBI 16.7104/IA/BF
		NPT 3/4	102			38	CBI 16.7204/IA	CBI 16.7204/IA/BF
	CBI 25	G 1	123			55	CBI 25.7105/IA	
		G 1 1/4	126.5			55	CBI 25.7106/IA	
		NPT 1 1/4	121.5			55	CBI 25.7206/IA	

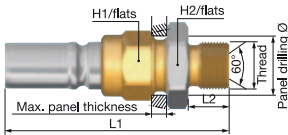
BSP male thread with 60° cone and integrated sealing 	CBI 03	G 1/8	39.5	8		13	CBI 03.7150/IA	CBI 03.7150/IA/BF
	CBI 06	G 1/4	54	10		17	CBI 06.7151/IA	CBI 06.7151/IA/BF
		G 3/8	53.5	11		21	CBI 06.7152/IA	
	CBI 09	G 3/8	67	11		23	CBI 09.7152/IA	CBI 09.7152/IA/BF
	CBI 12	G 1/2	85	14		30	CBI 12.7153/IA	CBI 12.7153/IA/BF
	CBI 16	G 3/4	100.5	15		38	CBI 16.7154/IA	CBI 16.7154/IA/BF
CBI 25	G 1 1/4	101	21		55	CBI 25.7156/IA		

Extended, BSP male thread with 60° cone and integrated sealing 	CBI 06	G 1/4	74	10	64	17	CBI 06.7151/IA/64	
		G 1/4	92	10	82	17	CBI 06.7151/IA/80	
		G 1/4	122	10	112	17	CBI 06.7151/IA/110	

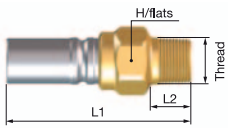
Part numbers

Plugs

Designation	Model	Thread	Dimensions (mm)						Part numbers	
			L1	L2	H1/flats	H2/flats	Panel drilling \varnothing	Max. panel thickness	Standard	BF option
Panel mount, BSP male thread with 60° cone	CBI 03	G 1/8	46	8	13	15	12.5	4.5	CBI 03.5150/IA	CBI 03.5150/IA/BF
	CBI 06	G 1/4	60.5	11	17	21	16.5	4	CBI 06.5151/IA	CBI 06.5151/IA/BF
	CBI 09	G 3/8	72	12	23	27	22.5	4	CBI 09.5152/IA	CBI 09.5152/IA/BF
	CBI 12	G 1/2	96	14	30	34	28.5	6	CBI 12.5153/IA	CBI 12.5153/IA/BF
	CBI 16	G 3/4	111.5	16	38	46	36.5	5	CBI 16.5154/IA	CBI 16.5154/IA/BF



Conical male thread



CBI 06	NPT 1/4	53.5	11		17			CBI 06.7251/IA	
	NPT 3/8	53	11		19			CBI 06.7252/IA	
	R 1/4	53.5	11		17			CBI 06.7161/IA	
CBI 09	NPT 3/8	69	11		23			CBI 09.7252/IA	
	R 3/8	67	11		23			CBI 09.7162/IA	
CBI 12	R 1/2	89	15		30			CBI 12.7163/IA	CBI 12.7163/IA/BF
CBI 25	NPT 1 1/4	98.5	22.5		55			CBI 25.7256/IA	


Additional equipment



KES sealing kits

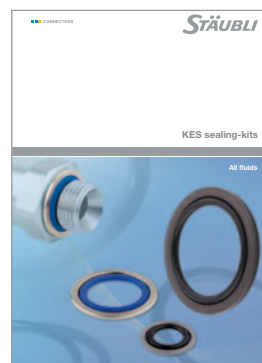


KES sealing kits consist of a retaining ring and an O-ring to create a perfect seal between the socket and its base.

Part numbers that are compatible with this option are indicated with the symbol  in the part number tables on pages 7 and 8.

KES kits can be ordered separately

Select the specific ring and seal materials for your application, using our new documentation KES RP003.



Protective dust caps

(To be ordered separately)

Available for all models in this range.

Socket dust cap part number:

CBI xx.8500



Plug dust cap part number:

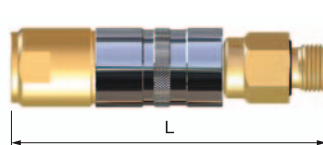
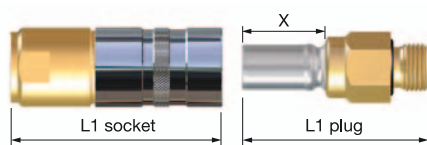
CBI xx.8550



Overall dimensions in connected position:

$$L = (L1 \text{ socket} + L1 \text{ plug}) - X$$

Model	X (mm)	Model	X (mm)
CBI 03	18.6	CBI 12	46
CBI 06	24.7	CBI 16	57
CBI 09	33	CBI 25	67.4





● Stäubli Units ○ Representatives/Agents

Global presence of the Stäubli Group

www.staubli.com