FAST MOVING TECHNOLOGY

STÄUBLI

MCB quick couplings

All fluids

Stainless steel anti-pollution technology at the service…

Five available diameters
The MCB is available in five diameters: 03, 05, 08, 12 and 16 mm.

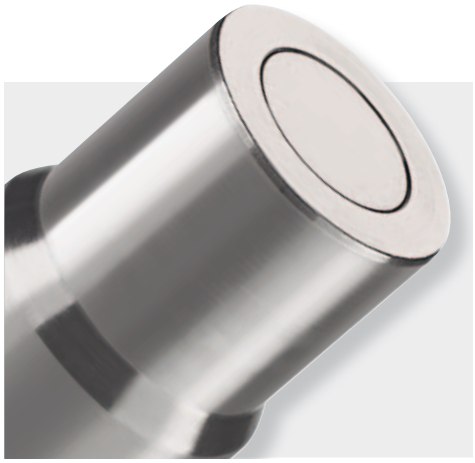
Excellent mechanical resistance
The robust construction and long plug guiding into the socket gives the MCB excellent mechanical resistance, capable of withstanding mechanical vibrations, oscillations, etc.

Pollution-preventing flush flat faces to ensure fluid integrity
- No introduction of air or polluting agents into circuits.
- Cleaning facilitated before connection.

A large number of balls ensure safe and fast locking

Spill-free to ensure operator and installation safety
- No discharge and no work place contamination due to a loss of fluid during the disconnection.
- Protection of tools and production equipment.

Efficiency
Optimal flow in the smallest size.



... of fluids and applications in corrosive environments

Resistance and durability
Thanks to its stainless steel construction, the MCB has been designed to resist the most severe working environments and to reduce the risk of corrosion, guaranteeing reliable performance over time.

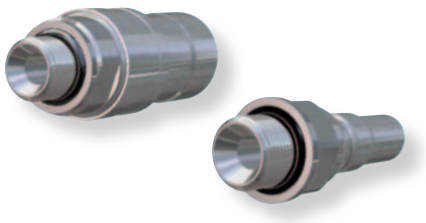
Seven seal variants and three possible options

Push, it's connected
With automatic locking, MCB couplings create easier handling.
Ideal for blind and repetitive connections.

Compact design
Particularly suitable for applications with difficult access.

Material traceability
We can provide upon request a certificate of cast analysis, type 3.1.

Simplicity of connection
Sealing by KES sealing-kit possible on **all BSP cylindrical sockets and plugs.**



Clean-break connections and disconnections for all fluids, without spillage, in corrosive environments, meeting today's cleanliness requirements across industry:

- Industrial processes
- Test benches
- Chemical fluid sampling
- Cooling of electronic connections
- Filling of tanks, etc.

In the chemical, pharmaceutical and electronic industries, etc.

Technical data

		MCB 03	MCB 05	MCB 08	MCB 12	MCB 16
Nominal diameter DN (mm)		3	5	8	12	16
Maximum allowable pressure PS [1] (bar)		100	70	70	50	50
Maximum allowable pressure PS [1] (bar) with Oxygen application option		50	50	50	50	50
Shut-off	double					

[1] Other pressures and conditions of use: consult us.

Working temperatures following the seal selection*

Without protective dust caps

Types of seal	Minimum and maximum allowable temperatures **TS** (°C)
Nitrile (NBR)	- 15 to + 100
Fluorocarbon (FPM)	- 10 to + 200
Ethylene-Propylene (EPDM)	- 20 to + 150
Perfluoroelastomer (FFKM)	0 to + 250
Fluorosilicone (FMQ)	- 40 to + 175

Working temperatures of chloroprene (CR) **protective dust caps**: - 20 to + 100 °C

For a use outside the ranges of indicated temperatures: consult us.

* The minimal temperatures of use are given in statics and except mechanical requests.

Construction

- Mainly stainless steel 316 series. For more information, consult us.
- Protective dust caps:
  - for socket: Aluminium and Chloroprene (CR)
  - for plug: Chloroprene (CR)
- KES sealing-kit: stainless steel ring

Possible options

(see page 7 for the code to be applied)

- Electrolytic polishing + passivation
- For oxygen applications
- Degreasing

Attention ! The oxygen application option (OX) as well as the Fluorosilicone (FMQ) seal limit the working pressure of the product to 50 bar maximum.

Sealing

A choice of seals is available on all the models of sockets, plugs and KES kits (see page 7):

- Nitrile (NBR) in standard
- Fluorocarbon (FPM)
- Ethylene-Propylene (EPDM)**
- Ethylene-Propylene (EPDM)*** with FDA option
- Ethylene-Propylene (EPDM)**** with USP option
- Perfluoroelastomer (FFKM) in the fluid jet
- Fluorosilicone (FMQ)

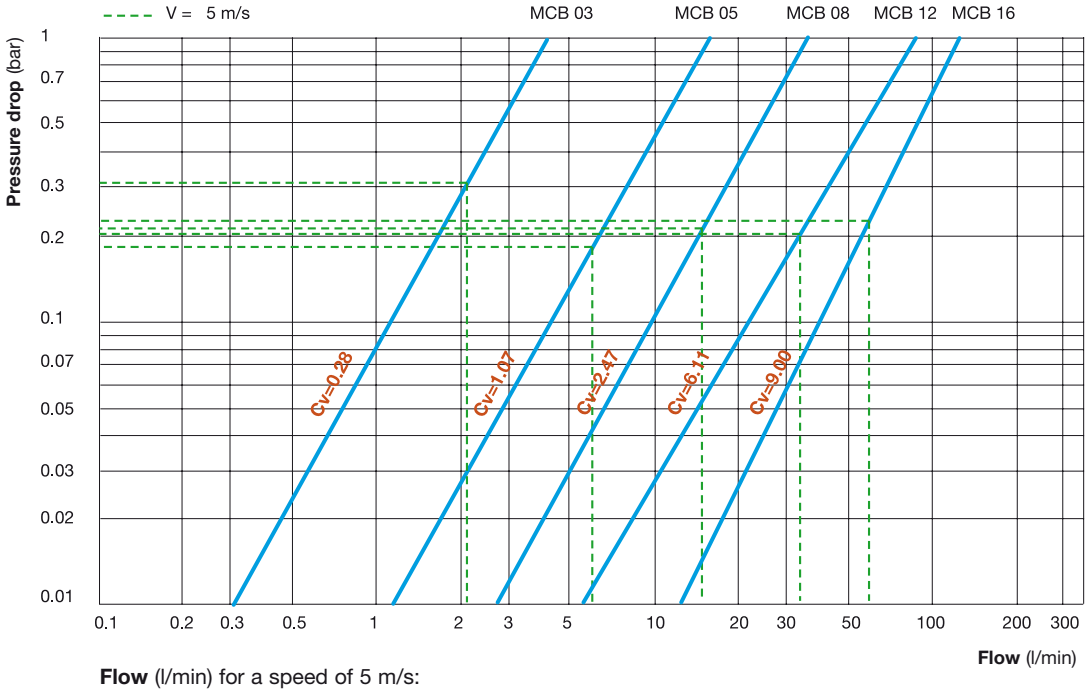
Other seal materials available on request.

** **Important !** The use and any contact of this seal with fluids of mineral origin (oil, fat… etc.) is not advised.

*** Meets the FDA requirements.

**** Meets the requirements of Class VI – +70 °C in vivo tests § <88> by USP34, National Formulary 29, 2011.

Hydraulic flow rate / pressure drop charts

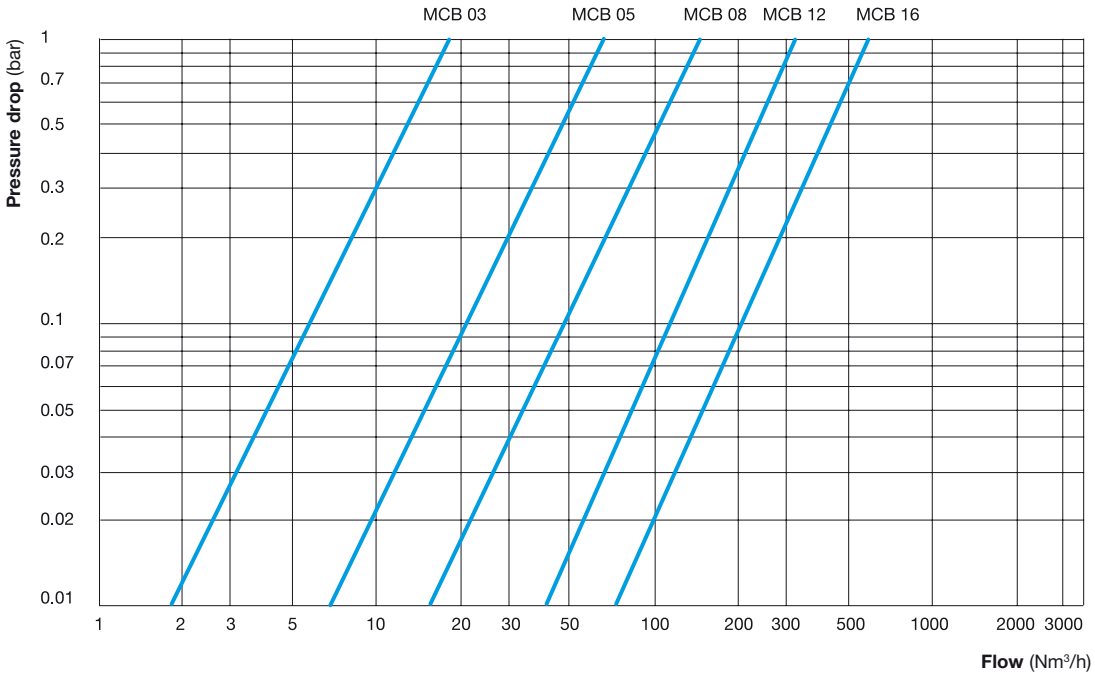


Test conditions:
- Fluid: water
- Direction of flow:
  Plug ⟶ Socket

Flow (l/min) for a speed of 5 m/s:

MCB 03	**MCB 05**	**MCB 08**	**MCB 12**	**MCB 16**
2.1	5.9	15.1	33.,9	60.3

Pneumatic flow rate / pressure drop charts



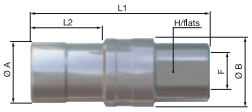
Test conditions:
- Inlet pressure: 6 bar
- Direction of flow:
  Plug ⟶ Socket

Part numbers

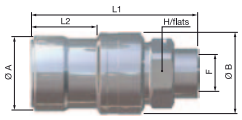
Sockets

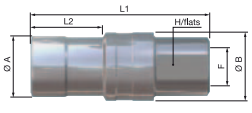
Descriptions	Models	Threads F	Dimensions (mm)						Part numbers
			L1	L2	L3	ØA	ØB	H/flats	
BSP female thread	**MCB 03**	G 1/8	48.6	19		15	17	13	**MCB03.1100/IC**
	MCB 05	G 1/4	63.7	25.8		21.8	24.5	19	**MCB05.1101/IC**
	MCB 08	G 3/8	72.3	24.4		29	32.5	24	**MCB08.1102/IC**
	MCB 12	G 1/2	95.5	37.6		42.5	46	36	**MCB12.1103/IC**
	MCB 16	G 3/4	106	41		51.5	59.5	46	**MCB16.1104/IC**
NPT female thread	**MCB 03**	NPT 1/8	46.6	19		15	17	13	**MCB03.1200/IC**
	MCB 05	NPT 1/4	63.2	25.8		21.8	24.5	19	**MCB05.1201/IC**
	MCB 08	NPT 3/8	70.8	24.4		29	32.5	24	**MCB08.1202/IC**
	MCB 12	NPT 1/2	94.5	37.6		42.5	46	36	**MCB12.1203/IC**
	MCB 16	NPT 3/4	103.5	41		51.5	59.5	46	**MCB16.1204/IC**
BSP male thread	**MCB 03**	G 1/8	40.6	19	8	15	17	13	**MCB03.1150/IC**
	MCB 05	G 1/4	52.2	25.8	11	21.8	24.5	19	**MCB05.1151/IC**
	MCB 08	G 3/8	60.3	24.4	12	29	32.5	24	**MCB08.1152/IC**
	MCB 12	G 1/2	82	37.6	14	42.5	46	36	**MCB12.1153/IC**
	MCB 16	G 3/4	88	41	16	51.5	59.5	46	**MCB16.1154/IC**

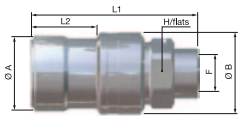
MCB 3, 5 and 8 mm models

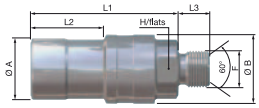


MCB 12 and 16 mm models



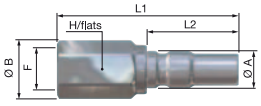


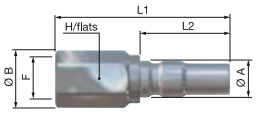


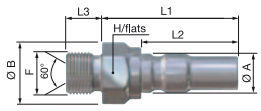


Plugs

Descriptions	Models	Threads F	Dimensions (mm)						Part numbers
			L1	L2	L3	ØA	ØB	H/flats	
BSP female thread	**MCB 03**	G 1/8	43.6	20		7.4	14.5	13	**MCB03.7100/IC**
	MCB 05	G 1/4	58.6	29.6		12.2	19	17	**MCB05.7101/IC**
	MCB 08	G 3/8	64.4	34.4		17.4	23.5	21	**MCB08.7102/IC**
	MCB 12	G 1/2	74	49.9		26.7	30	27	**MCB12.7103/IC**
	MCB 16	G 3/4	84.5	57.5		33;4	39	35	**MCB16.7104/IC**
NPT female thread	**MCB 03**	NPT 1/8	41.6	20		7.4	14.5	13	**MCB03.7200/IC**
	MCB 05	NPT 1/4	57.6	29.6		12.2	19	17	**MCB05.7201/IC**
	MCB 08	NPT 3/8	62.9	34.4		17.4	23.5	21	**MCB08.7202/IC**
	MCB 12	NPT 1/2	74	49.9		26.7	30	27	**MCB12.7203/IC**
	MCB 16	NPT 3/4	83.5	57.5		33.4	39	35	**MCB16.7204/IC**
BSP male thread	**MCB 03**	G 1/8	30.5	20	8	7.4	14.5	13	**MCB03.7150/IC**
	MCB 05	G 1/4	41.6	29.6	11	12.2	19	17	**MCB05.7151/IC**
	MCB 08	G 3/8	46.9	34.4	12	17.4	23.5	21	**MCB08.7152/IC**
	MCB 12	G 1/2	58	49.9	14	26.7	30	27	**MCB12.7153/IC**
	MCB 16	G 3/4	67	57.5	16	33.4	39	35	**MCB16.7154/IC**







KES sealing-kit

(to be separately ordered)

Composed of a retaining ring and an O-ring seal, the KES ensures a perfect sealing between the socket or the plug and the existing equipment support. This type of sealing is possible on **the BSP cylindrical sockets and plugs** (the compatible part numbers with this option are characterized by the symbol KES in part numbers tables of page 6). For more information, consult our leaflet KES RP003.

Part numbers available in the same seal variants as for sockets and plugs (add the corresponding code at the end of the part number):

G 1/8 ..... **KES 01.9100/IC**
G 1/4 ..... **KES 01.9101/IC**
G 3/8 ..... **KES 01.9102/IC**
G 1/2 ..... **KES 01.9103/IC**
G 3/4 ..... **KES 01.9104/IC**

Protective dust caps

(to be separately ordered)

Socket part numbers:
MCB 03..... **MCB03.8500**
MCB 05..... **MCB05.8500**
MCB 08..... **MCB08.8500**

Plug part numbers:
MCB 03..... **MCB03.8550**
MCB 05..... **MCB05.8550**
MCB 08..... **MCB08.8550**

To meet the requirements of specific industries, the MCB range is also available:

- **In remote control version** for nuclear (please see documentation RG200).

How to build your part number

Add to the standard part number of the product **(1)** the type of seal (other than nitrile) **(2)**, then only for sockets and plugs the possible option **(3)**. Options are not accumulative on the same part number.

For sockets and plugs

1 Standard part number (page 6)
- with Nitrile seal .....**no code**

2 Seal selection (other than Nitrile)
- Fluorocarbon (FPM).....**JV code**
- Ethylene-Propylene (EPDM) .....**JE code**
- Ethylene-Propylene (EPDM)
  - with FDA option..... **JE/FDA code**
  - with USP option ..... **JE/USP code**
- Perfluoroelastomer (FFKM).....**JK code**
- Fluorosilicone (FMQ).....**JS3 code**

3 Other possible options
- Electrolytic polishing + passivation ..... **PE code**
- Oxygen application.....**OX code**
- Degreasing.....**DG code**

Example of a complete socket part number with options:

MCB 05.1151 / IC / JV / PE
1 2 3

For KES kits

1 KES standard part number (page 7)
- with Nitrile seal .....**no code**

2 Seal selection (other than Nitrile)
- Fluorocarbon (FPM).....**JV code**
- Ethylene-Propylene (EPDM) .....**JE code**
- Ethylene-Propylene (EPDM)
  - with FDA option..... **JE/FDA code**
  - with USP option ..... **JE/USP code**
- Perfluoroelastomer (FFKM).....**JK code**
- Fluorosilicone (FMQ).....**JS3 code**

Example of a KES kit part number:

KES 01.9100 / IC / JV
1 2

RC1530301A

■ Stäubli Units ○ Representatives/Agents

Global presence of the Stäubli Group

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