

MCB All fluids





Stainless steel anti-pollution technology at the service...

Applications

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.

5 available diameters

The MCB is available in 5 diameters: 03, 05, 08, 12 and 16 mm.



Pollution-preventing flush flat faces to ensure fluid integrity

- No introduction of air or polluting agents into your circuits
- Cleaning facilitated before connection

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



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.

Efficiency

Optimal flow in the smallest size.

STÄUBLI

... of your fluids and applications in corrosive environments



A large number of balls ensure safe and fast locking

Resistance and durability

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

7 seal variants and 3 possible options

Push, it's connected

With automatic locking, MCB couplings give you easier handling.

Ideal for blind and repetitive connections.

Compact design

Particularly suitable for applications with difficult access.

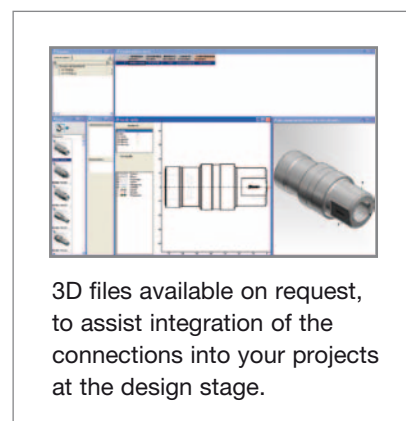
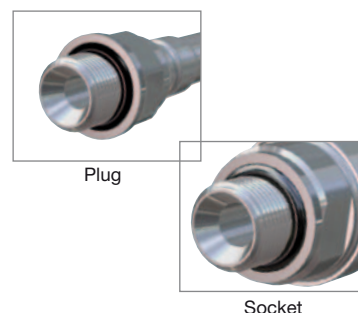
Material traceability

We can provide on 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**.



3D files available on request, to assist integration of the connections into your projects at the design stage.



Technical data

	MCB 03	MCB 05	MCB 08	MCB 12	MCB 16
Bore diameter (mm)	3	5	8	12	16
Shut-off double					
Max. working pressure (bar)*	100	70	70	50	50
Max. working pressure (bar)* with Oxygen application option	50	50	50	50	50

*Other pressures and conditions of use: consult us

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.) are not advised.

** Meets the FDA requirements.

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

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.

Working temperatures following the seal selection ****

Without protective dust caps

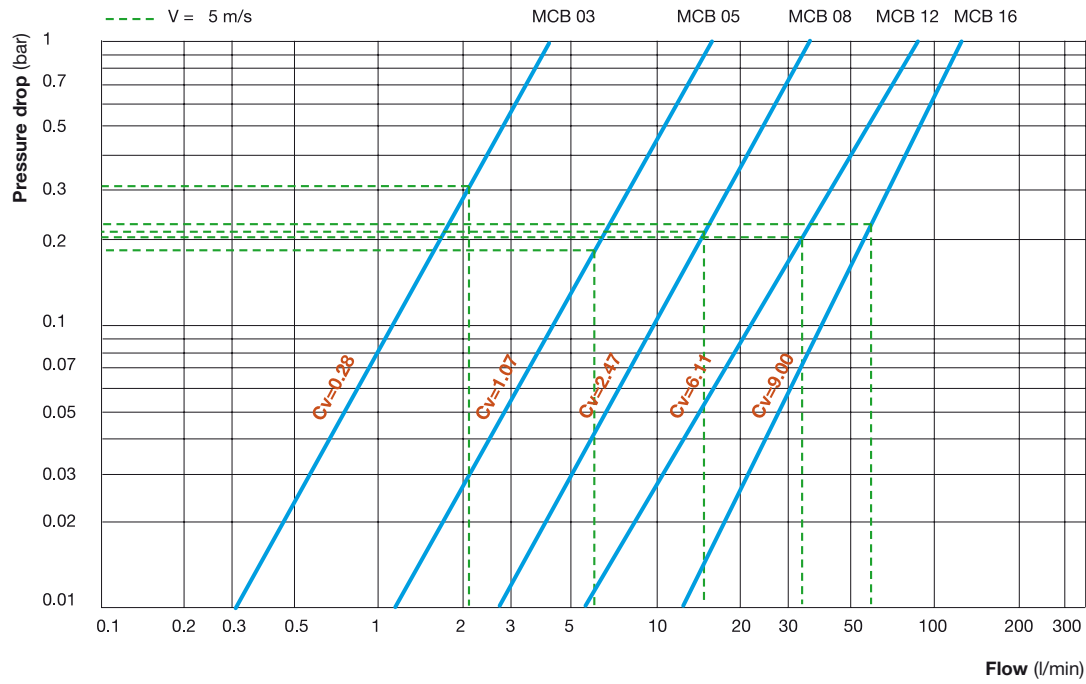
Types of seal	Working temperatures (°C)
Nitrile (NBR)	- 15 to + 100
Fluorocarbon (FPM)	- 10 to + 200
Ethylene-Propylene (EPDM)	- 20 to + 150
Perfluoroelastomer (FFKM)	0 to + 250
Fluorosilicone (FMQ)	- 40 to + 175

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.

Hydraulic flow rate / pressure drop charts

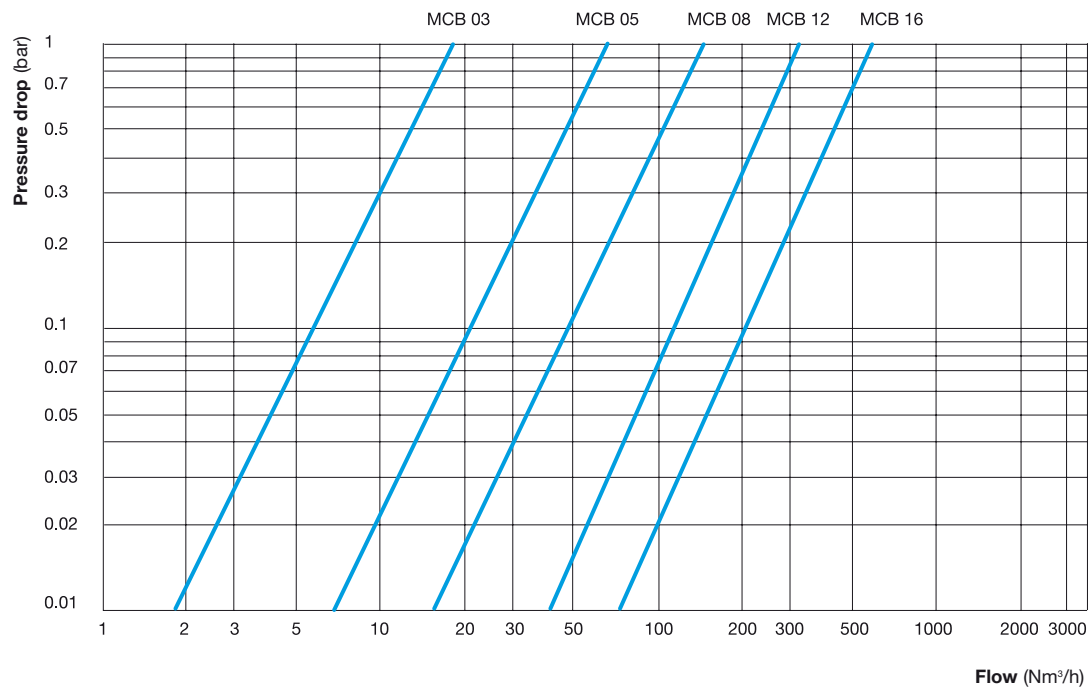


Test conditions:

- Fluid: water
- Density: 998 Kg/m³
- Viscosity: 1.08 cSt
- Direction of flow: Plug → Socket

Flow (l/mn) 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

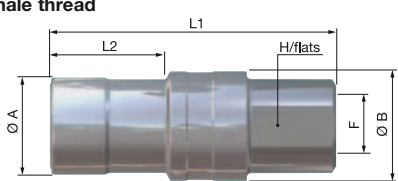
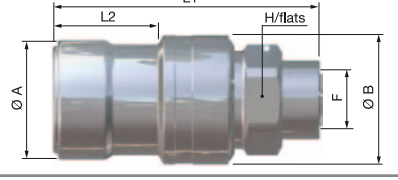
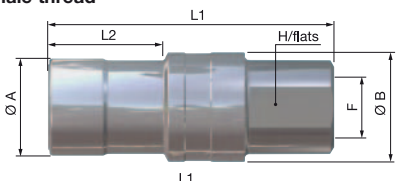
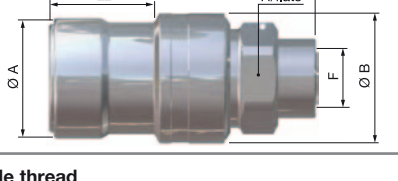
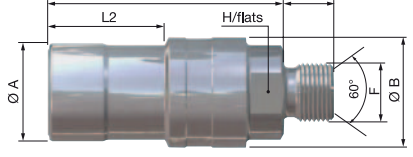


Test conditions:

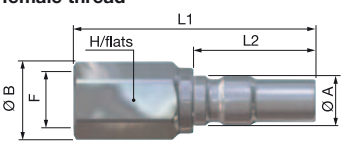
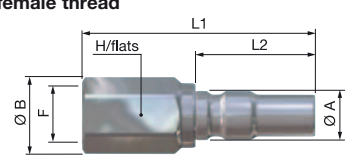
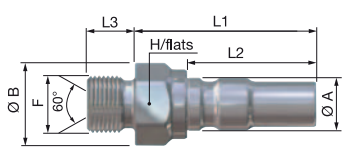
- Inlet pressure: 6 bar
- Direction of flow: Plug → Socket

Part-numbers

Sockets

Designations	Models	Threads F	Dimensions (mm)					Part-numbers	
			L1	L2	L3	Ø A	Ø B		H/flats
1. Socket BSP female thread  MCB 3, 5 and 8 mm models  MCB 12 and 16 mm models	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
2. Socket NPT female thread  MCB 3, 5 and 8 mm models  MCB 12 and 16 mm models	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	MCB 12.1203/IC
	MCB 16	NPT 3/4	103.5	41		51.5	59.5	46	MCB16.1204/IC
3. Socket 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

Plugs

Designations	Models	Threads F	Dimensions (mm)					Part-numbers	
			L1	L2	L3	Ø A	Ø B		H/flats
1. Plug 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	21	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
2. Plug 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
3. Plug 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)

KES sealing-kit	Models	Part-numbers
	G 1/8	KES01.9100/IC
	G 1/4	KES01.9101/IC
	G 3/8	KES01.9102/IC
	G 1/2	KES01.9103/IC
	G 3/4	KES01.9104/IC

Composed of a retaining ring and an O-ring seal, the KES ensure a perfect sealing between the socket or the plug and your support.

This type of sealing is possible on **all the BSP cylindrical sockets and plugs** (the compatible part-numbers with this option are characterized by the symbol 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 (see below).

Protective dust caps

(to be separately ordered)

For socket	Models	Part-numbers
	MCB 03	MCB03.8500
	MCB 05	MCB05.8500
	MCB 08	MCB08.8500

For plug	Models	Part-numbers
	MCB 03	MCB03.8550
	MCB 05	MCB05.8550
	MCB 08	MCB08.8550

Options

To build your part-number, add to the **standard part-number 1** of the product, in the order indicated below:

- the **type of seal 2** (other than nitrile)

- The **possible option 3** (only for sockets and plugs).

Not accumulative options 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)
<ul style="list-style-type: none"> • Fluorocarbon (FPM)..... JV code • Ethylene-Propylene (EPDM)..... JE code • Ethylene-Propylene (EPDM) with FDA option..... JE/FDA code • Ethylene-Propylene (EPDM) with USP option..... JE/USP code • Perfluoroelastomer (FFKM)..... JK code • Fluorosilicone (FMQ)..... JS3 code

3 Other possible options
<ul style="list-style-type: none"> • Electrolytic polishing + passivation..... PE code • Oxygen application..... OX code • Degreasing..... DG code

For KES kits

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

2 Seal selection (other than Nitrile)
<ul style="list-style-type: none"> • Fluorocarbon (FPM)..... JV code • Ethylene-Propylene (EPDM)..... JE code • Ethylene-Propylene (EPDM) with FDA option..... JE/FDA code • Ethylene-Propylene (EPDM) with USP option..... JE/USP code • Perfluoroelastomer (FFKM)..... JK code • Fluorosilicone (FMQ)..... JS3 code

Example of a complete socket part-number with options:

MCB 05.1151 / IC / JV / PE
1 2 3

Example of a KES kit part-number:

KES 01.9100 / IC / JV
1 2

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



Global presence of the Stäubli Group

- Stäubli units
- Agents

International sales coordination

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