

FAST MOVING TECHNOLOGY

*STÄUBLI*

# MCB/TM quick-release couplings for remote handling

**Nuclear | Non-spill**



# Antipollution technology...





# ... for your confinement cell applications

## Applications

"Clean-break", non-spill connections and disconnections for all fluids and gases to meet the requirements of your environment in terms of:

- Corrosive fluid connections
- Decontamination fluid connections

## Five available diameters

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

## Easy to connect

The long guide element on the plug permits easy connector coupling that is suitable for remote handling.

## Antipollution technology

With non-spill flush faces, the MCB/TM connector prevents air from entering the circuits during connection and avoids any contamination of the confinement cell during disconnection.

## Easy remote handling

Specifically designed for remote handling:

- Square body for enhanced pincer grip.
- 2 ribbed faces and front mechanical stop for improved locking on connection.
- Rear mechanical stop for simplified disconnection.

## Large number of locking balls for fast, secure locking.

## Just push to connect

The MCB 05/TM's automatic locking mechanism will give you the ease of handling required for repeated connection to all your confinement cells.

## Material traceability

We can provide on request a certificate of cast analysis, type 3.1.

## Optional emergency disconnect cable.

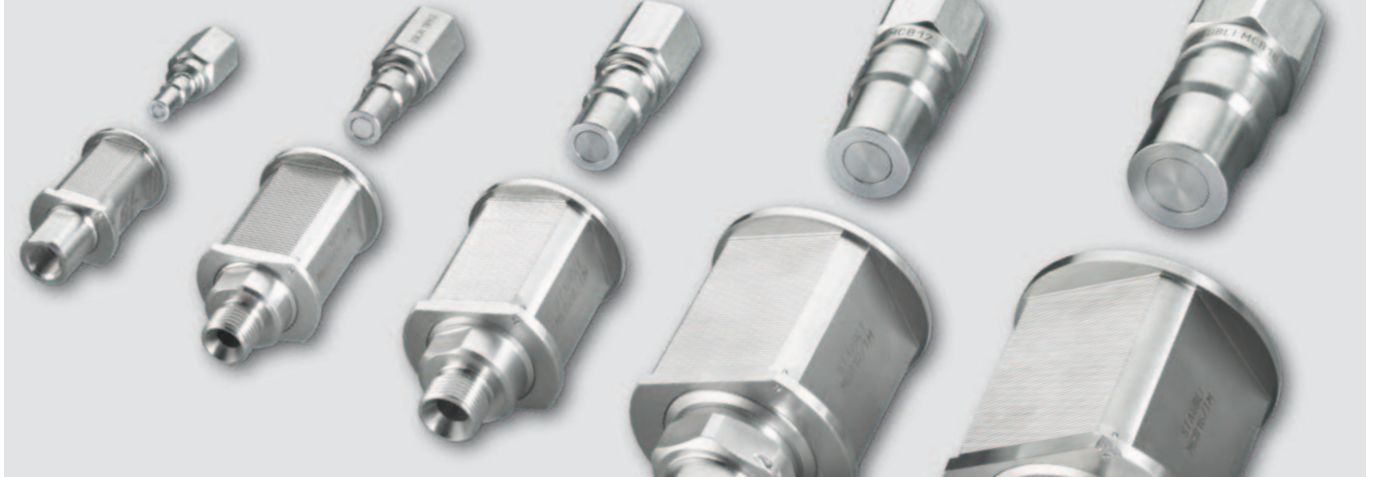
## 3D models available on request.



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.

# Technical characteristics



	MCB 03/TM	MCB 05/TM	MCB 08/TM	MCB 12/TM	MCB 16/TM
<b>Nominal diameter</b> (mm)	3	5	8	12	16
<b>Maximum allowable pressure PS</b> (bar)	100	70	70	50	50
<b>Minimum and maximum allowable temperatures TS</b> (°C) depending on seal material:					
- Ethylene-Propylene (EPDM)			- 20 and + 150		
- Fluorocarbon (FPM)			- 10 and + 200		
- Perfluoroelastomer (FFKM)			0 and + 250		
<b>Shut-off</b>	double				

## Construction

Mainly stainless steel 316 series.

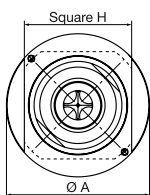
For more information, consult us.

## Tightness

- As standard: Ethylene-Propylene (EPDM) seals, JE code.
- Optional: replace the JE code with the corresponding seal code in the part numbers pages 6 and 7.
  - Ethylene-Propylene PMUC version: JE/UC code
  - Fluorocarbon (FPM): JV code
  - Perfluoroelastomer (FFKM): JK code

## Remote handling data

### Socket for remote handling



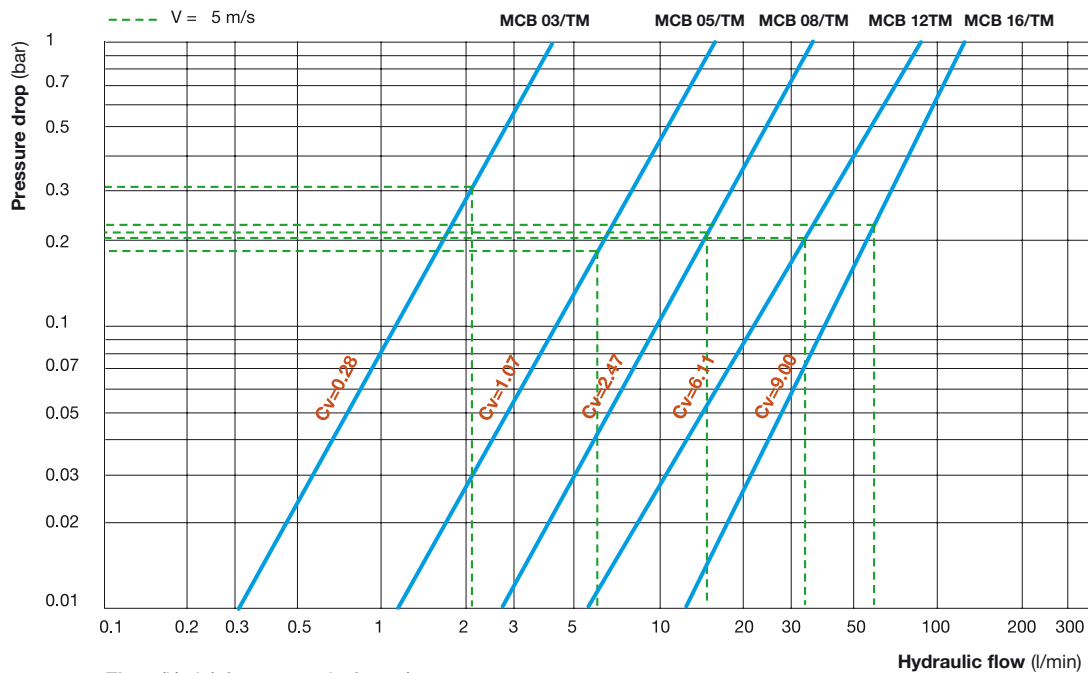
Model	Dimensions (mm)	
	Ø A	Square H
<b>MCB 03/TM</b>	25	18
<b>MCB 05/TM</b>	34	25
<b>MCB 08/TM</b>	44	33
<b>MCB 12/TM</b>	64	48
<b>MCB 16/TM</b>	79	60

### Connecting and disconnecting forces

	MCB 03/TM	MCB 05/TM	MCB 08/TM	MCB 12/TM	MCB 16/TM
<b>Connecting force</b> (daN)	<5.5	<10.2	<10.7	<11.7	<14.6
<b>Disconnecting force</b> (daN)	<2.5	<3.4	<4.5	<3.9	<2.3

These mean values are for illustrative purposes and may vary depending on the fluid conveyed, the type of seal used and the lubrication.

## Hydraulic flow rate / pressure drop charts



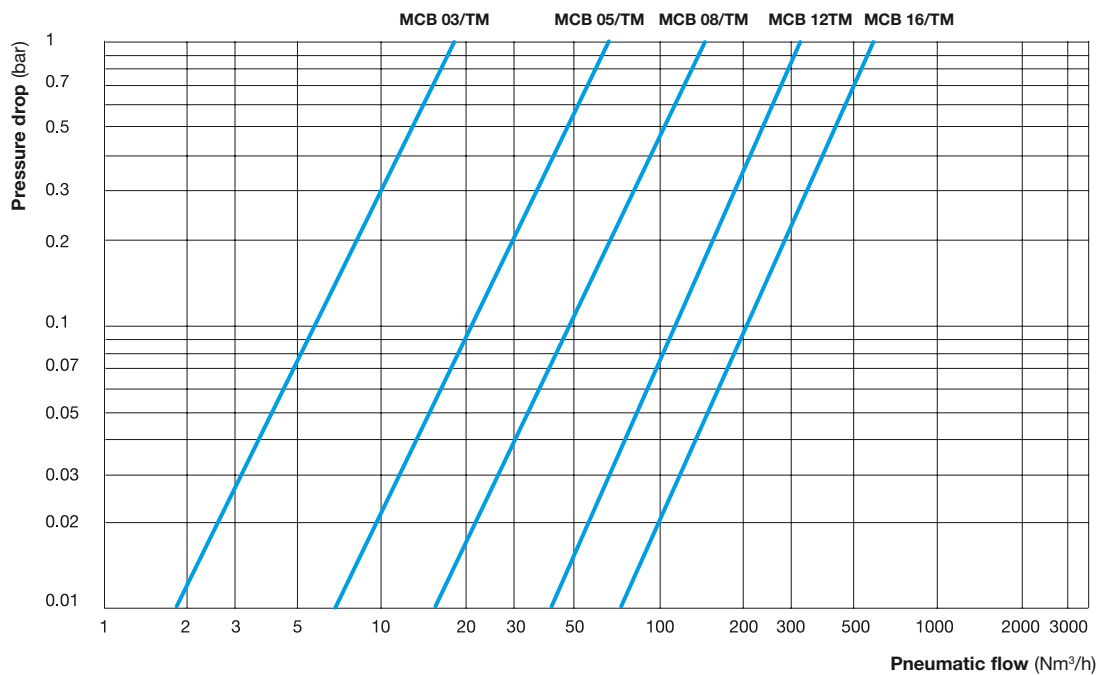
Flow (l/min) for a speed of 5 m/s:

MCB 03/TM	MCB 05/TM	MCB 08/TM	MCB 12/TM	MCB 16/TM
2.1	5.9	15.1	33.9	60.3

**Test conditions:**

- Fluid: water (998 kg/m<sup>3</sup>; 1,08 cSt)
- Direction of flow: Plug → Socket

## Pneumatic flow rate / pressure drop charts



**Test conditions:**

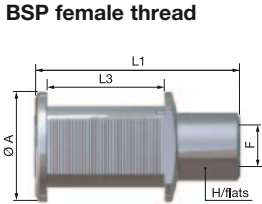
- Fluid: air
- Inlet pressure: 6 bar
- Direction of flow: Plug → Socket

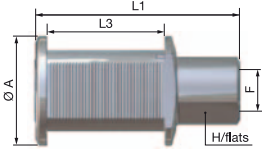
## PART NUMBERS

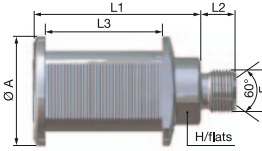
# Configuration

## Sockets for remote handling and fixed plugs

### TM sockets

Description	Model	End connection F	Dimensions (mm)					Part numbers
			L1	L2	L3	ØA	H/flats	
<b>BSP female thread</b> 	<b>MCB 03/TM</b>	G 1/8	48.6		27.5	25	13 2 flats	<b>MCB 03.1100/IC/TM/JE</b>
	<b>MCB 05/TM</b>	G 1/4	63.7		36.5	34	19 2 flats	<b>MCB 05.1101/IC/TM/JE</b>
	<b>MCB 08/TM</b>	G 3/8	72.3		42	44	24 2 flats	<b>MCB 08.1102/IC/TM/JE</b>
	<b>MCB 12/TM</b>	G 1/2	95.3		53	64	36 Hex	<b>MCB 12.1103/IC/TM/JE</b>
	<b>MCB 16/TM</b>	G 3/4	106		62	79	46 Hex	<b>MCB 16.1104/IC/TM/JE</b>

<b>NPT female thread</b> 	<b>MCB 03/TM</b>	NPT 1/8	46.6		27.5	25	13 2 flats	<b>MCB 03.1200/IC/TM/JE</b>
	<b>MCB 05/TM</b>	NPT 1/4	63.7		36.5	34	19 2 flats	<b>MCB 05.1201/IC/TM/JE</b>
	<b>MCB 08/TM</b>	NPT 3/8	70.8		42	44	24 2 flats	<b>MCB 08.1202/IC/TM/JE</b>
	<b>MCB 12/TM</b>	NPT 1/2	94.3		53	64	36 Hex	<b>MCB 12.1203/IC/TM/JE</b>
	<b>MCB 16/TM</b>	NPT 3/4	103.5		62	79	46 Hex	<b>MCB 16.1204/IC/TM/JE</b>

<b>BSP male thread</b> 	<b>MCB 03/TM</b>	G 1/8	40.6	8	27.5	25	13 2 flats	<b>MCB 03.1150/IC/TM/JE</b>
	<b>MCB 05/TM</b>	G 1/4	52.2	11	36.5	34	19 2 flats	<b>MCB 05.1151/IC/TM/JE</b>
	<b>MCB 08/TM</b>	G 3/8	60.3	12	42	44	24 2 flats	<b>MCB 08.1152/IC/TM/JE</b>
	<b>MCB 12/TM</b>	G 1/2	81.8	14	53	64	36 Hex	<b>MCB 12.1153/IC/TM/JE</b>
	<b>MCB 16/TM</b>	G 3/4	88	16	62	79	46 Hex	<b>MCB 16.1154/IC/TM/JE</b>

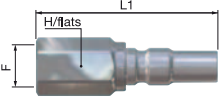
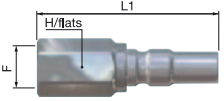
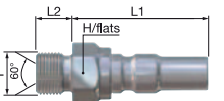


#### A Stäubli remote handling solution for each application


- **RBE/TM** for liquids and gases,
- Non-spill **MCB/TM** for liquids and gases,
- Very high pressure **THX/TM** for supply of hydraulic shears during dismantling in cells,
- Full-flow **UPB/TM** for contaminated fluid transfer.

Don't hesitate to call your Stäubli senior sales engineer to discuss the most suitable solution for your application meeting your specific requirements.

Fixed plugs

Description	Model	End connection F	Dimensions (mm)			Part numbers
			L1	L2	H/flats	
<b>BSP female thread</b> 	MCB 03	G 1/8	43.6		13	MCB03.7100/IC/JE
	MCB 05	G 1/4	58.6		17	MCB05.7101/IC/JE
	MCB 08	G 3/8	64.4		21	MCB08.7102/IC/JE
	MCB 12	G 1/2	74		27	MCB12.7103/IC/JE
	MCB 16	G 3/4	84.5		35	MCB16.7104/IC/JE
<b>NPT female thread</b> 	MCB 03	NPT 1/8	41.6		13	MCB03.7200/IC/JE
	MCB 05	NPT 1/4	57.6		17	MCB05.7201/IC/JE
	MCB 08	NPT 3/8	62.9		21	MCB08.7202/IC/JE
	MCB 12	NPT 1/2	74		27	MCB12.7203/IC/JE
	MCB 16	NPT 3/4	83.5		35	MCB16.7204/IC/JE
<b>BSP male thread</b> 	MCB 03	G 1/8	30.5	8	13	MCB03.7150/IC/JE
	MCB 05	G 1/4	41.6	11	17	MCB05.7151/IC/JE
	MCB 08	G 3/8	46.9	12	21	MCB08.7152/IC/JE
	MCB 12	G 1/2	58	14	27	MCB12.7153/IC/JE
	MCB 16	G 3/4	67	16	35	MCB16.7154/IC/JE


KES sealing kit - Stainless steel 316 series

Retaining ring + O-ring seal	Thread F	Part numbers with Ethylene-Propylene seals
	G 1/8	KES 01.9100/IC/JE
	G 1/4	KES 01.9101/IC/JE
	G 3/8	KES 01.9102/IC/JE
	G 1/2	KES 01.9103/IC/JE
	G 3/4	KES 01.9104/IC/JE

Other seal material

Replace the JE code with the corresponding seal code:

- Ethylene-Propylene PMUC version: JE/UC code
- Fluorocarbon (FPM): JV code
- Perfluoroelastomer (FFKM): JK code

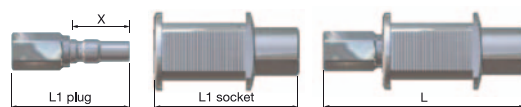
Part numbers that are compatible with this option are indicated with the symbol  in the part number tables on pages 6 and 7.

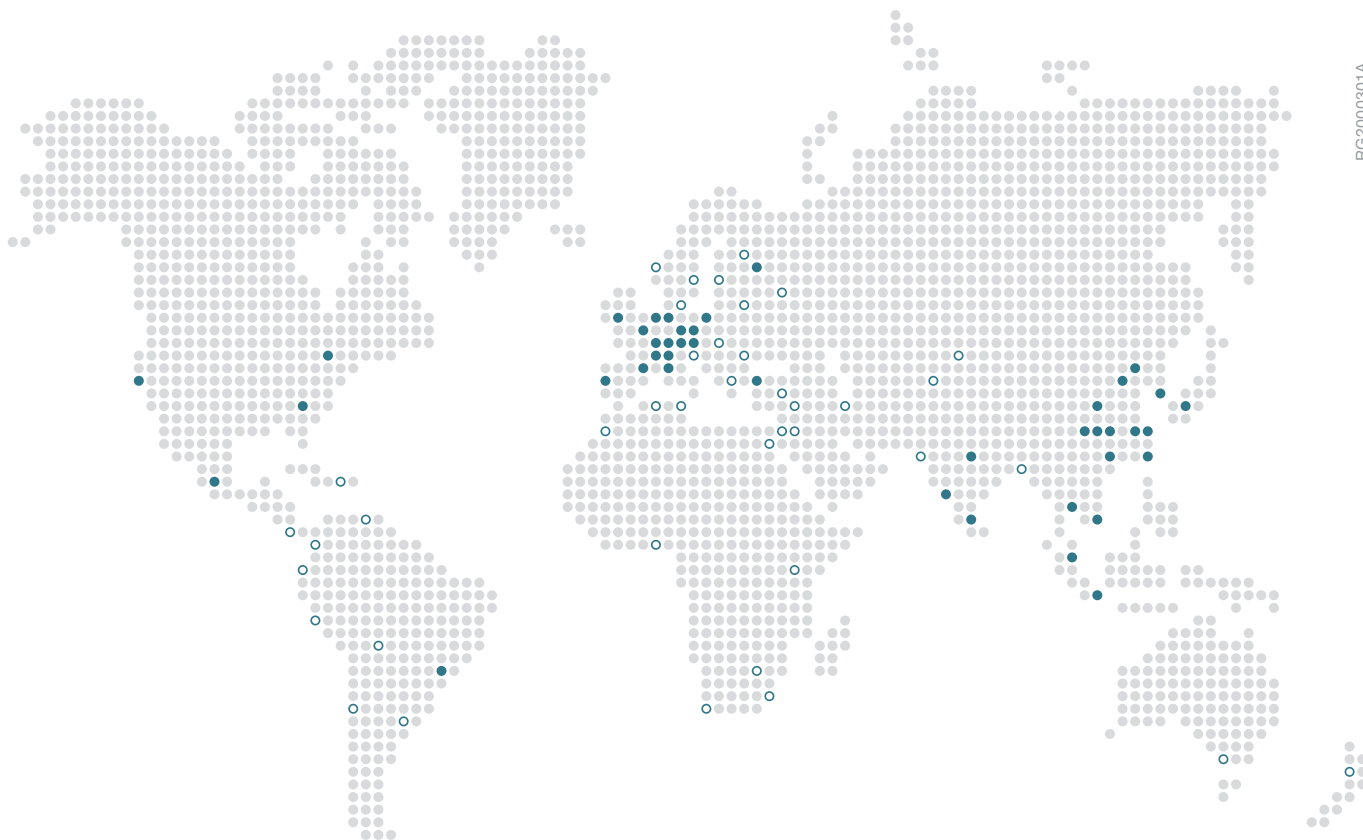
Find all our KES rings in the KES P 003 brochure.

Overall dimensions in connected position

Model	X (mm)
MCB 03	18.6
MCB 05	27.8
MCB 08	32.3
MCB 12	46.4
MCB 16	51

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





● Staubli Units    ○ Representatives / Agents

# Global presence of the Staubli Group

[www.staubli.com](http://www.staubli.com)