DME®

STÄUBLI

Quick Connector Systems

MOLD TEMPERATURE CONTROL | HYDRAULICS

FAST MOVING TECHNOLOGY

FAST MOVING TECHNOLOGY

THE FULL FLOW SOLUTION... ROBUST & ERGONOMIC

RPL quick-release coupling
Temperature control | Full Flow

Colored ring visible = connection complete
Blue **KB**, red **KR**.

Colored ring not visible = connection incomplete

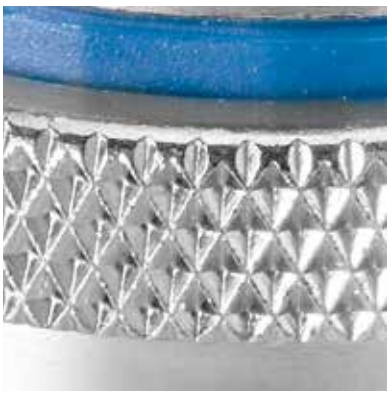
PTFE-coating
For perfect sealing

REGISTERED COMMUNITY DESIGN

STÄUBLI

RPL

Automatic push-to-connect
Ball-locking mechanism



Knurling
Ergonomic knurled ring

Colored ring
Circuit identification using different colors

Original parts
Always use original Stäubli parts

Quick and easy circuit identification

Plugs and sockets are equipped with red or blue colored rings to enable fast circuit identification. To further differentiate circuits, the sockets can also be numbered.

Secure locking with integrated safety

The robust connection with 8 locking balls can be visually confirmed using the colored ring. Disconnection requires two distinct actions to prevent accidents: push the parts together before pulling back the sleeve (no need for an additional safety clip).

Ergonomic connection and disconnection

The knurled locking ring makes it easy to grip the plug and one handed connections and disconnections are possible.

Easy installation

The male threads of straight sockets are PTFE coated for quick and leak tight installation.

High flow rates

The full flow design enables high flow rates and eliminates the risk of scaling.

Efficient maintenance

Seal replacement is quick and easy with no loss of time impacting productivity.

Strength and reliability

Tested in harsh multi cycling mechanical conditions.

Leak-tight

Connection is sealed around the circumference of the plug for consistent and long-term performance.

Applications

Connection of cold and hot fluid circuits, particularly for temperature control of molds on injection molding machines.

SIMPLE INTEGRATION

Suitable for both existing and new molds

On new molds

Flush fitting

- Easy mold storage
- No risk of damage to sockets

On existing molds

Slightly raised fitting

RPL TECHNICAL DATA

Construction

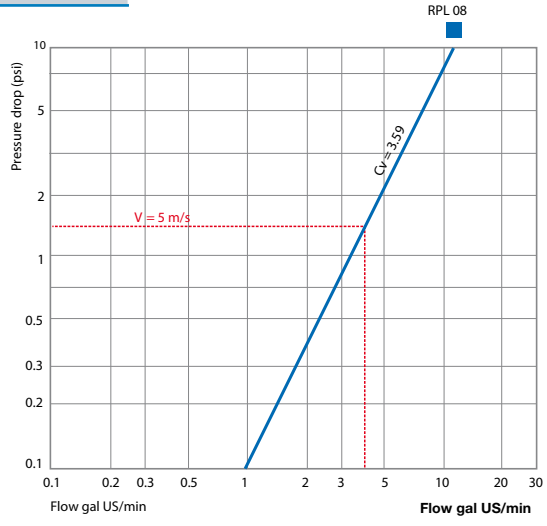
- Nickel plated brass socket, with PTFE pre-applied (straight male threaded sockets)
- Nickel plated brass plug
- Nitrile (NBR) seal
- 18/8 stainless steel spring and balls
- 8 balls.

Part numbers	RPL 08
Maximum allowable pressure PS (psi)	145
Minimum and maximum allowable temperatures TS (F)	5° and 194°

*For other conditions, please ask us.

FLOW RATE / PRESSURE DROP HYDRAULIC CHARTS

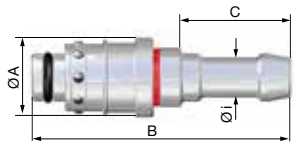
Test conditions:
Direction of flow: socket ⟶ plug
Water (density 0.998 g/cc, viscosity 1.08 cSt)



RPL-SERIES PLUGS & SOCKETS

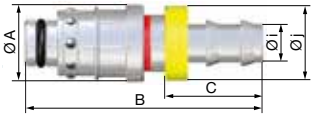
Plugs

Designation	Model	Dimensions (in)				Part numbers
		Øi	ØA	B	C	
Straight plug	**RPL 08**	3/8"	0.79	2.60	1.10	**RPL086810KB**
		1/2"	0.79	2.60	1.10	**RPL086812KB**
		3/8"	0.79	2.60	1.10	**RPL086810KR**
		1/2"	0.79	2.60	1.10	**RPL086812KR**



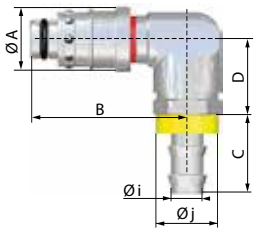
KB With blue ring **KR** With red ring

Designation	Model	Dimensions (in)					Part numbers
		Øi	ØA	B	C	Øj	
Straight plug for self-locking hose	**RPL 08**	3/8"	0.79	2.44	0.96	0.77	**RPL086810CNKB**
		1/2"	0.79	2.72	1.14	0.96	**RPL086813CNKB**
		3/8"	0.79	2.44	0.96	0.77	**RPL086810CNKR**
		1/2"	0.79	2.72	1.14	0.96	**RPL086813CNKR**



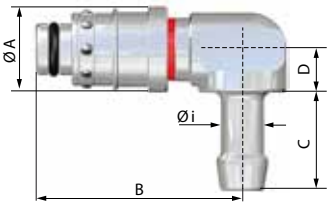
KB With blue ring **KR** With red ring

Designation	Model	Dimensions (in)						Part numbers
		Øi	ØA	B	C	D	Øj	
Plug 90° for self-locking hose	**RPL 08**	3/8"	0.79	1.91	0.96	0.93	0.77	**RPL086810CNKBRE**
		3/8"	0.79	1.91	0.96	0.93	0.77	**RPL086810CNKRRE**
		1/2"	0.79	1.91	1.14	1.00	0.96	**RPL086813CNKBRE**
		1/2"	0.79	1.91	1.14	1.00	0.96	**RPL086813CNKRRE**



KB With blue ring **KR** With red ring

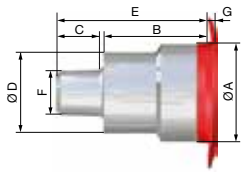
Designation	Model	Dimensions (in)					Part numbers
		Øi	ØA	B	C	D	
Plug 90° for hose	**RPL 08**	3/8"	0.79	1.91	0.91	0.39	**RPL086810KBRE**
		3/8"	0.79	1.91	0.91	0.39	**RPL086810KRRE**
		1/2"	0.79	1.91	1.10	0.39	**RPL086812KBRE**
		1/2"	0.79	1.91	1.10	0.39	**RPL086812KRRE**



KB With blue ring **KR** With red ring

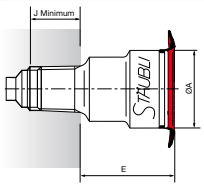
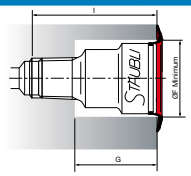
Sockets

Designation	Model	F thread	Dimensions (in)							Part numbers
			ØA	B	C	ØD	E	G	Allen key	
Straight socket male thread, PTFE pre-applied	**RPL08**	NPT 1/4	0.83	0.83	0.43	0.69	1.30	0.06	5/16"	**RPL081251KB**
		NPT 3/8	0.83	0.43	0.43	-	0.94	0.06	5/16"	**RPL081252KB**
		NPT 1/4	0.83	0.83	0.43	0.69	1.30	0.06	5/16"	**RPL081251KR**
		NPT 3/8	0.83	0.43	0.43	-	0.94	0.06	5/16"	**RPL081252KR**



KB With blue ring **KR** With red ring

INSTALLATION DIMENSIONS FOR THE SOCKET IN THE MOLD

		Proud socket			Flush socket			
								Chamfer the corners of the mold 0.012 x 0.012
Model	**Tapping**	**ØA**	**E**	**J min**	**ØF mini**	**G**	**I**	**Allen key**
	NPT 1/8	0.83	1.00	0.39	0.89	1.00	1.38	1/4"
	NPT 1/4	0.83	0.93	0.47	0.89	0.93	1.40	5/16"
	NPT 3/8	0.83	0.55	0.51	0.89	0.55	1.06	5/16"

FAST MOVING TECHNOLOGY

NON SPILL TECHNOLOGY PREVENTS POLLUTION IN AND OUT OF CIRCUITS

CBI quick-release coupling
Temperature Control | Non-spill

Automatic push-to-connect 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).

Flat-face design prevents pollution
Flat-face design helps prevent contamination from entering the fluid circuit.

Applications
Connection of water or hot oil circuits, particularly for mold temperature control and applications requiring high mechanical resistance.

STÄUBLI
CBI

CBI TECHNICAL DATA

		CBI 06	CBI 09
Nominal diameter DN (in.)		1/4"	3/8"
Maximum allowable pressure PS (PSI)		725	725
Minimum and maximum allowable temperatures TS (°F)		**+14 and +392**	**+14 and +392**
Shut-off	double		

Construction

Standard version: brass and stainless steel.
Fluorocarbon (FPM) seal

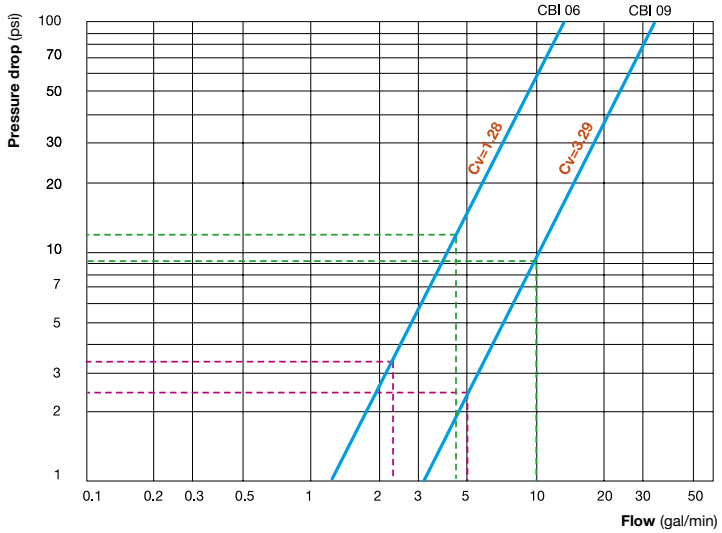
Hydraulic flow rate / pressure drop chart

Speed (ft/s)	**Flow** (gal/min)		
		CBI 06	**CBI 09**
16.5 - - - -		2.25	5.02
33 - - - -		4.49	10.04

- - - - Speed of flow less than or equal to 16.5 ft/s: all seals

- - - - Speed of flow between 16.5 and 33 ft/s:
- Fluorocarbon seals
- temperatures ≤ 60 °C

CBI 06 to CBI 09



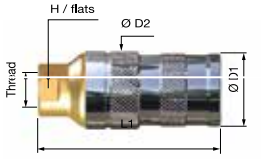
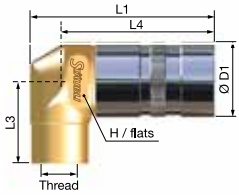
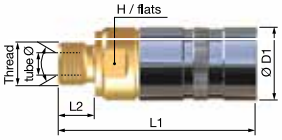
V = 16.5 ft/s - - - -
V = 33 ft/s - - - -

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

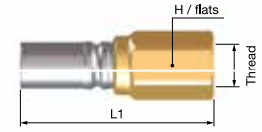
CAD files available on request from our sales network.

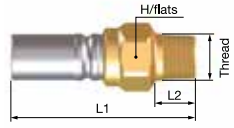
CBI-SERIES SOCKETS & PLUGS

Sockets

Designation	Model	Thread	Dimensions (in)						Part numbers
			Ø D1	L1	L2	L3	L4	H/flats	Standard
Female thread	**CBI 06**	NPT 1/4	0.87	2.40				0.67	**CBI061201IAJV**
	**CBI 09**	NPT 3/8	1.20	2.97				0.94	**CBI091202IAJV**
90° female thread	**CBI 06**	NPT 1/4			2.22		0.96	1.89	0.87	**CBI061201IAJVRE**
										
Male thread	**CBI 06**	NPT 1/4		2.56	0.57				0.79	**CBI061251IAJV**
										

Plugs

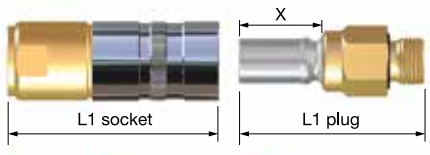
Designation	Model	Thread	Dimensions (in)				Part numbers
			L1	L2	L3	H/flats	Standard
Female thread	**CBI 06**	NPT 1/4	2.28			0.67	**CBI067201IAJV**
							

Designation	Model	Thread	Dimensions (in)						Part numbers
			L1	L2	H1/flats	H2/flats	Panel drilling Ø	Max. panel thickness	Standard
Conical male thread	**CBI 06**	NPT 1/4	2.11	0.43		0.67			**CBI067251IAJV**
	**CBI 09**	NPT 3/8	2.72	0.43		0.91			**CBI097252IAJV**

Overall dimensions in connected position:

L = (L1 socket + L1 plug) – X

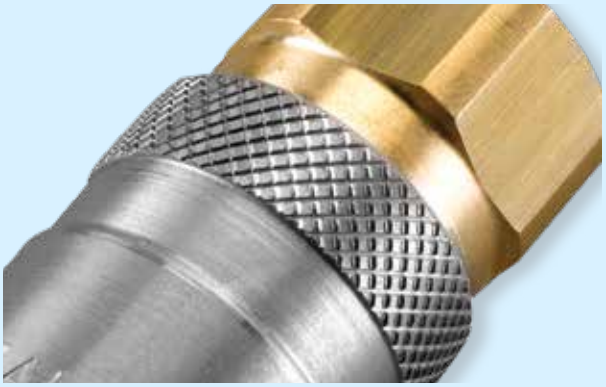
Model	X (mm)
CBI 06	24.7
CBI 09	33



FAST MOVING TECHNOLOGY

5 NOMINAL DIAMETERS FOR ANY FLOW

RMI quick-release coupling
Temperature control | Single or double shut-off



PATENTED

US Patent 8.123. 258
and other countries

Wide range
5 nominal diameters to cover all your applications.

Safe and quick locking
A large number of locking balls.
The long locking ring – knurled up to RMI 16 – with a wide flange from RMI 25 – provides easy handling for quick connection / disconnection.

Reliable and tough
The choice of materials (brass, stainless steel and chromium steel) makes RMI couplings robust and dependable.

Performance
Their internal design gives RMI couplings an excellent flow / pressure drop ratio with compact overall dimensions.

Leak-tight
Connection is sealed around the circumference of the plug for consistent and long-term performance.

Applications

Connection of hot and cold water circuits, particularly for temperature control of molds on injection molding machines.

STÄUBLI
RMI

RMI TECHNICAL DATA

Construction

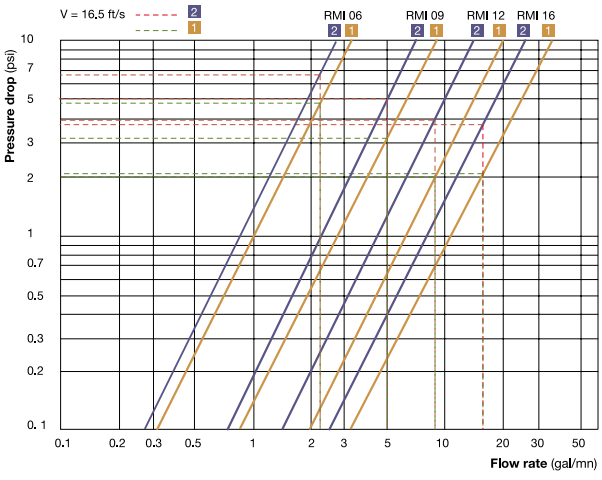
- Main parts in brass
- Coupling release sleeve in stainless steel
- Plug body:
- in hardened stainless steel (RMI 16 - 25)

		RMI 06	RMI 09	RMI 12	RMI 16	RMI 25
Nominal diameter DN (in.)		1/4	3/8	1/2	5/8	1
Maximum allowable pressure PS (psi)						
- max. working temperature < 302 °F		230	230	230	230	230
- max. working temperature > 150 °F		145	145	145	145	145
Leak tight during connection		X	X	X	X	X
Shut-off	single					
	double					

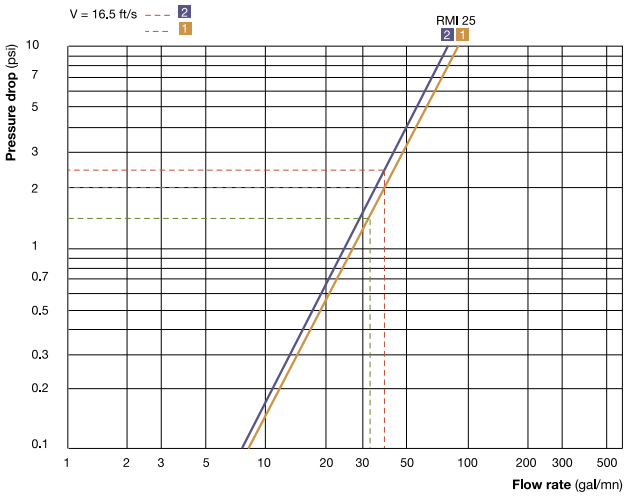
Working temperatures

Types of seal	Code	Minimum and maximum allowable temperatures TS (°F)
Fluorocarbon (FPM)	JV as standard	RMI 06 to RMI 16: +59 and +392
		RMI 25: +14 and +392

Flow rate / pressure drop charts



1 Single shut-off circuit
2 Double shut-off circuit



1 Single shutoff circuit
2 Double shutoff circuit

RMI 06
1 Cv = 1.05
2 Cv = 0.85

RMI 09
1 Cv = 2.8
2 Cv = 2.2

RMI 12
1 Cv = 6.35
2 Cv = 4.5

RMI 16
1 Cv = 11.2
2 Cv = 7.7

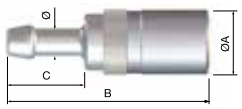
RMI 25
1 Cv = 28.3
2 Cv = 26

Test conditions:
- Fluid: Water
- Direction of flow: socket → plug

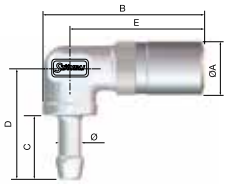
RMI-SERIES SOCKETS & PLUGS

Sockets

Designation	Models	Dimensions (in.)						Part numbers
		Ø	Ø A	B	C	D	E	
Socket with shut-off valve for rubber hoses	**RMI 09**	3/8"	0.98	2.60	0.91			**RMI091810JV**
		1/2"	0.98	2.68	1.10			**RMI091812JV**
	RMI 12	5/8"	1.22	3.23	1.10			**RMI121816JV**
	RMI 16	3/4"	1.50	4.27	1.30			**RMI161819JV**



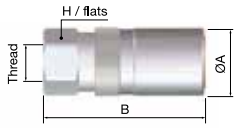
Designation	Models	Dimensions (in.)						Part numbers
		Ø	Ø A	B	C	D	E	
Socket 90° with shut-off valve for rubber hoses	**RMI 09**	0.39	0.98	2.58	0.91	1.85	2.15	**RMI091810JVRE**
		0.47	0.98	2.58	1.10	2.17	2.15	**RMI091812JVRE**



Ø = hose internal diameter (in.)

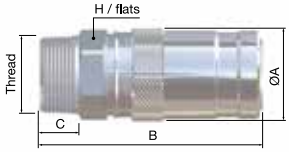
Sockets

Designation	Models	Dimensions (in.)							Part numbers
		Thread	Ø A	B	C	H/flats	D	E	
Socket with shut-off valve female thread	**RMI 06**	NPT 1/4	0.75	1.77		0.67			**RMI061201JV**
	RMI 09	NPT 3/8	0.98	2.03		0.87			**RMI091202JV**
	RMI 12	NPT 1/2	1.22	2.56		1.06			**RMI121203JV**
	RMI 16	NPT 3/4	1.50	3.48		1.38			**RMI161204JV**
	RMI 25	NPT 1 1/4	2.28	5.39		1.97			**RMI251206JV**



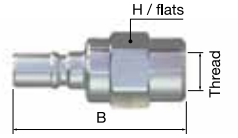
Sockets

Designation	Models	Dimensions (in.)							Part numbers
		Thread	Ø A	B	C	H/flats	D	E	
Socket with shut-off valve NPT male thread	**RMI 25**	NPT 1 1/2	2.28	5.65	0.96	1.97			**RMI251257JV**



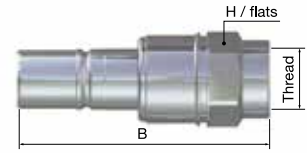
Plugs

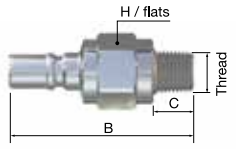
Designation	Models	Dimensions (in.)					Part numbers
		Thread	B	C	H/flats	ØD	
Self-sealing plug female thread	**RMI 12**	NPT 1/2	3.35		1.06		**RMI127203JV**
	RMI 16	NPT 3/4	3.19		1.26		**RMI167204JV**

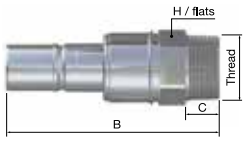


RMI-SERIES PLUGS

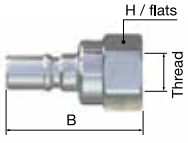
Plugs

Designation	Models	Dimensions (in.)					Part numbers
		Thread	B	C	H/flats	ØD	
Self-sealing plug female thread 	**RMI 25**	NPT 1 1/4	5.73		1.97		**RMI257206JV**

Designation	Models	Dimensions (in.)					Part numbers
		Thread	B	C	H/flats	ØD	
Self-sealing plug NPT male thread 	**RMI 06**	NPT 1/4	1.81	0.43	0.67		**RMI067251JV**
	RMI 09	NPT 1/4	2.05	0.51	0.75		**RMI097251JV**
		NPT 3/8	1.91	0.51	0.75		**RMI097252JV**
	RMI 12	NPT 3/8	2.44	0.51	0.94		**RMI127252JV**
		NPT 1/2	2.44	0.59	0.94		**RMI127253JV**
	RMI 16	NPT 3/4	3.19	0.75	1.26		**RMI167254JV**

Designation	Models	Dimensions (in.)					Part numbers
		Thread	B	C	H/flats	ØD	
Self-sealing plug NPT male thread 	**RMI 25**	NPT 1 1/2	6.14	0.96	1.97		**RMI257257JV**

Designation	Models	Dimensions (in.)				C	H/flats (hexagon)	Part numbers
		Required tapping	A	ØB	L min.			
Installation of fully recessed straight-through plugs, taper male thread 	**RMI 12**	NPT 1/2	1.34	1.30	0.59		0.87	**RMI126253**

Designation	Models	Dimensions (in.)					Part numbers
		Ø or thread	B	C	H/flats	Ø D	
Straight-through plug female thread Assembly with 2 parts 	**RMI 12**	NPT 1/2	2.64		1.06		**RMI126203**

FAST MOVING TECHNOLOGY

NON-SPILL TECHNOLOGY PREVENTS POLLUTION IN AND OUT OF YOUR HYDRAULIC CIRCUITS

MPX hydraulic quick coupling
hydraulics | Non-spill

A complete and wide range

The MPX is available:

- in 3 diameters: from 6 to 12 mm.
- in NPT thread

Non-spill, flush-face

The MPX avoids the introduction of air into the hydraulic circuits whilst assuring no pollution of the working area. Prior to connection the flush faces may be easily wiped to prevent contamination of the circuits.

Safety locking feature

A safety pin prevents accidental pulling back of the sleeve. To activate this safety feature a simple rotation of the sleeve after connection is required.

Optimal flow

The MPX coupling ensures maximum efficiency of machinery and equipment thanks to excellent flow characteristics.

High tolerance to temperature and hydraulic fluid compatibility

The MPX couplings are equipped with Fluorocarbon (FPM) seals as standard giving:
Compatibility with the majority of hydraulic fluids.
Wide range of operating temperatures.

Applications

Connection of hydraulic circuits, particularly for injection molding machinery, core pulling circuits etc

STÄUBLI

MPX

MPX TECHNICAL DATA

Automatic connection

Automatic connection is achieved simply by pushing the plug into the socket.

Complies to hydraulic standards

The MPX range is designed to comply with the standard ISO 16 028.
In addition the MPX 10 complies to the standard ANSI / (NFPA) T3.20.15 required by the HTMA (Hydraulic Tool Manufacturers Association).

	MPX 06	MPX 10	MPX 12
Nominal diameter DN (mm)	6	10	12
Maximum allowable pressure PS (bar)	315	250	250
Minimum and maximum allowable temperatures TS (°F):			
with Fluorocarbon seal	14 to +356	14 to +356	14 to +356
Shut-off double			

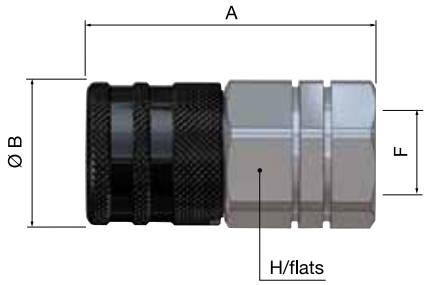
Construction

- High tensile steel
  with anti-corrosion treatment.
- Fluorocarbon seal (FPM)
  in standard.

MPX-SERIES PLUGS & SOCKETS

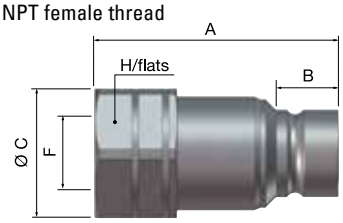
Sockets

Designations	Models	Threads F	Dimensions (in)			Part numbers
			A	Ø B	H/flats	
NPT female thread	MPX 06	NPT 1/4	2.09	1.14	1.06	MPX061201JV
	MPX 10	NPT 3/8	2.56	1.26	1.18	MPX101202JV
		NPT 1/2	2.76	1.26	1.18	MPX101203JV
	MPX 12	NPT 1/2	3.03	1.57	1.42	MPX121203JV
		NPT 3/4	3.31	1.57	1.42	MPX121204JV

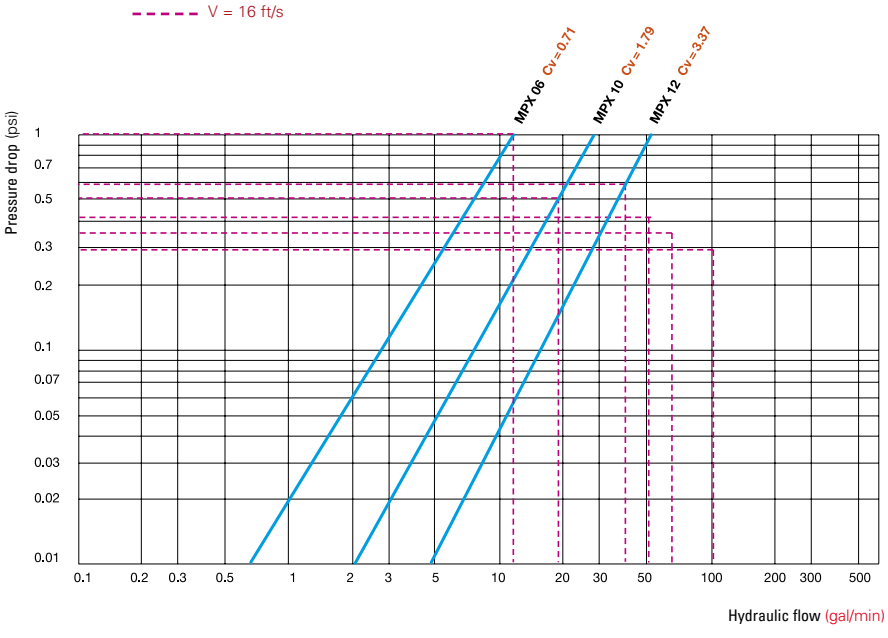


Plugs

Designations	Models	Threads F	Dimensions (in)				Part numbers
			A	B	Ø C	H/flats	
NPT female thread	MPX 06	NPT 1/4	1.89	0.43	0.94	0.87	MPX067201JV
	MPX 10	NPT 3/8	2.36	0.63	1.14	1.06	MPX107202JV
		NPT 1/2	2.46	0.63	1.14	1.06	MPX107203JV
	MPX 12	NPT 1/2	2.68	0.69	1.57	1.42	MPX127203JV
		NPT 3/4	2.78	0.69	1.57	1.42	MPX127204JV



Hydraulic flow rate / pressure drop charts



Flow (gmp) for a speed of 16 ft/s

MPX 06	MPX 10	MPX 12
3.06	5.02	10.57

Test conditions:

- Oil ISO VG32
- Temperature: 104 °C
- Viscosity: 28.8 – 35.2 cSt
- Direction of flow: Socket → Plug

FAST MOVING TECHNOLOGY

FLUSH-FACED VALVES FOR OVERCOMING RESIDUAL PRESSURE IN HYDRAULIC CIRCUITS

CBX quick-release coupling
Hydraulics | Flush-face for residual pressure

Connection under residual pressure
A central relief valve built into the socket or the plug valve reduces residual pressure in the circuit.

Push; and it's connected
Automatic locking CBXs give you ever easier handling.
A concept that is especially suitable for:
- blind connection
- repeated connections

Excellent mechanical strength
The robust construction, with extended plug guidance in the socket, provides the CBX with great strength to withstand high mechanical stresses (vibrations, oscillations, etc).

Flat-face design helps prevent
contamination from entering the fluid circuit.

Compact design
Especially suitable for difficult access situations.

Efficiency
Maximum flow in the smallest size.

Applications:
Connection of hydraulic circuits for all type of industries, especially in plastics.

STÄUBLI
CBX

CBX TECHNICAL DATA

Minimum and maximum allowable temperatures without dust cap

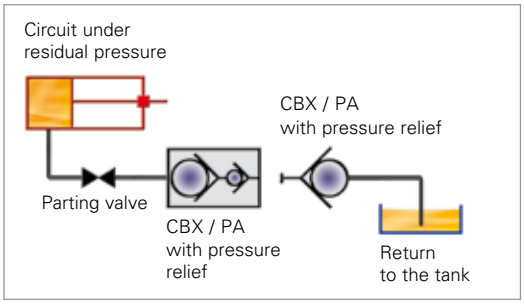
Type of seal	Minimum and maximum allowable temperatures TS (°C)
Fluorocarbon (FPM)	-10 and +200

Construction

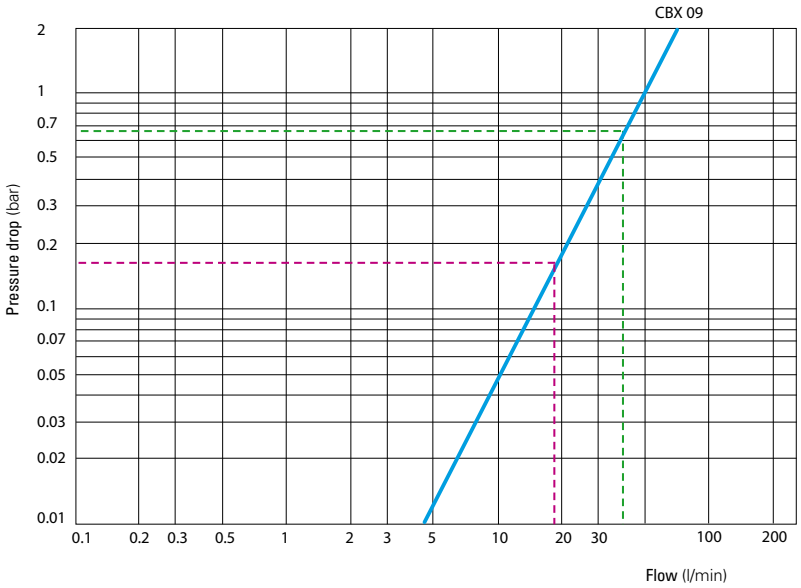
CBX 09: brass and stainless steel.

Connection under residual pressure (/PA)

		CBX 09/PA
Maximum allowable pressure PS (bar)		180
Max. residual pressure for connection under pressure (bar)	Socket	40
	Plug	150



Hydraulic flow rate / pressure drop chart



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

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

Test conditions:
Fluid: water
Direction of flow: plug → socket

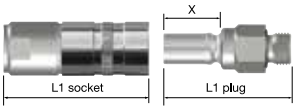
Speed (m/s)	CBX 09
5	19
10	38

	CBX 09
CV	3.29

Overall dimensions in connected position:

L = (L1 socket + L1 plug) – X

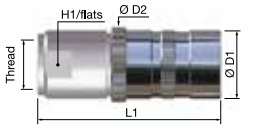
Model	X (mm)
CBX 09	33



CBX-SERIES SOCKETS & PLUGS

Sockets

Designation	Models	Thread	Dimensions (mm)				Part numbers
			Ø D1	Ø D2	L1	H/flats	Standard
Female thread	**CBX 09**	NPT 3/8	31.5	36	75.5	24	**CBX091202JVPA**



Plugs

Designation	Models	Thread	Dimensions (mm)		Part numbers
			L1	H/flats	Standard
Female thread	**CBX 09**	NPT 3/8	70	23	CBX097202JVPA

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From complex undercuts solutions and plate control to standard pins, bushings and interlocks, the DME line of mold components will help you build or rebuild your mold base inside out, top to bottom. Industrial Supplies, Control Systems, and Hot Runner solutions round out our extensive offering to truly be your one-stop shop.

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