

RMI Temperature control





7 nominal diameters ...

- hot and cold water, glycol water and heat transfer fluid circuits
- temperature control on injection presses

Wide range

7 nominal diameters from 6 to 37 mm, to cover all your applications.

Safe and quick locking

A large number of locking balls or pins depending on the models.
The long locking ring – knurled up to RMI 16 – with a wide flange from RMI 20 – provides easy handling for quick and easy connection / disconnection.



Reliable and robust

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 optimum flow and compact overall dimensions.



... for any flow



From 20 mm diameter

Leak tight during connection

The long profile of the plug ensures a perfect leak tight connection.

Automatic RMI 37 couplings

Automatic connection by simply pushing the plug into the socket.



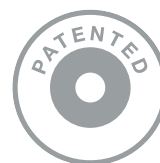
Immediate visual circuit identification

Red and blue rings provide quick and easy identification of your hot and cold water circuits.



Shoulder locking ring

for an even better gripping on disconnection.



US Patent 8.123. 258
and other countries



Technical data

	RMI 06	RMI 09	RMI 12	RMI 16	RMI 20	RMI 25	RMI 37
Max. working pressure (bar)							
- max. working temperature <150 °C	16	16	16	16	16	16	16
- max. working temperature >150 °C	10	10	10	10	10	10	10
Bore diameter (mm)	06	09	12	16	20	25	37
Leak tight during connection	no	no	no	no	yes	yes	yes
Shut-off single or double							



KES sealing kit

KES kits, comprising a retaining ring and an O' ring seal, provide perfect sealing between the socket or plug and your base.

Some BSP cylindrical male thread sockets and plugs are delivered as standard with a KES sealing kit (indicated in the paragraph title).

The symbol  just before the thread indication in the tables indicates that the BSP cylindrical female thread socket or plug is KES compatible if the customer interface complies with Stäubli profile.

For more precisions, consult the leaflet P 003 e.

Construction

- Main parts in brass
- Coupling release sleeve in stainless steel
- Plug body:
 - in hardened stainless steel (RMI 16 - 20 - 25)
 - in high resistance stainless steel (RMI 37)

Types of seal	Code	Working temperatures (°C)
Fluorocarbone (FPM)	JV as standard	RMI 06 to RMI 16: + 15 to + 200 RMI 20 to RMI 37: - 10 to + 200
Ethylene-Propylene (EPDM) *	JE	RMI 06 to RMI 16: - 10 to + 150 RMI 20 to RMI 37: - 20 to + 150
Nitrile (NBR)	no code	- 15 to + 100
Perfluoroelastomer (FFKM) in the fluid jet	JKV	0 to + 250

Other pressures and fluids: call us.

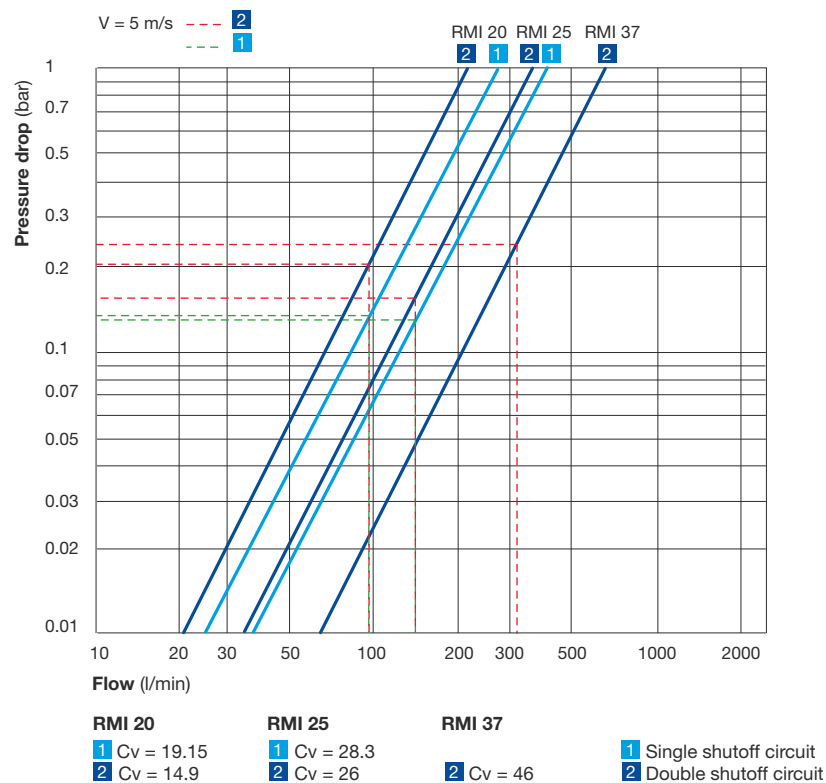
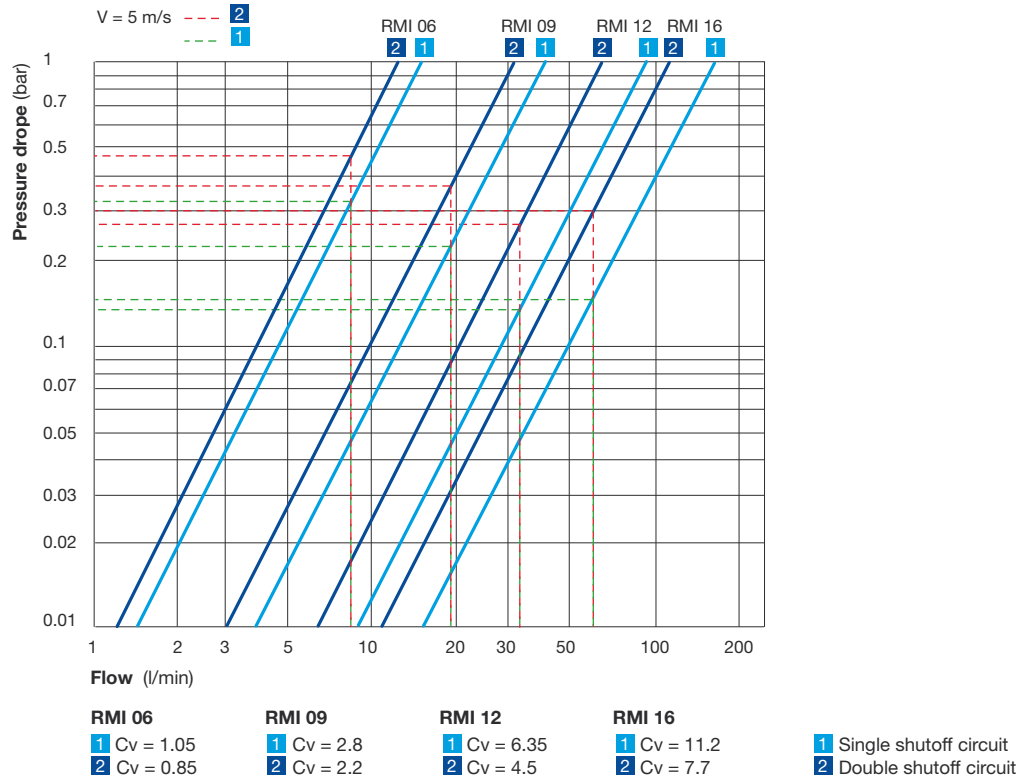
* Important!

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

Recommendation

The working temperatures and pressures are given for the Stäubli plug/socket set alone. It is essential to ensure that the other components of the circuit (hoses, end connections...) are also appropriate for the application.

Flow rate / pressure drop charts

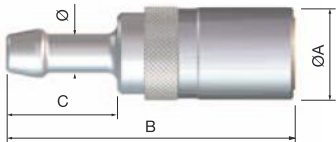
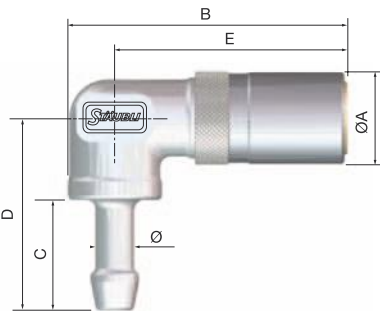
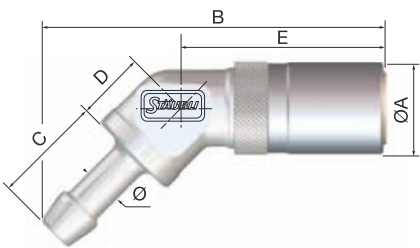


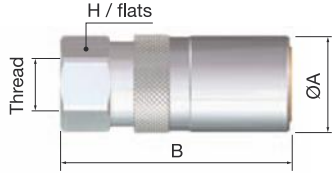
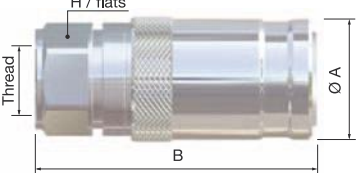
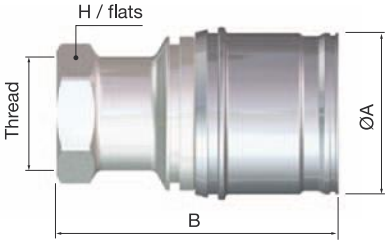
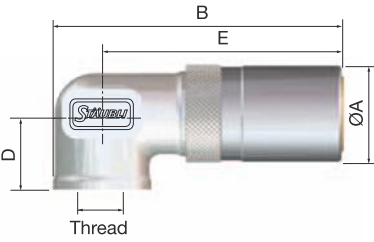
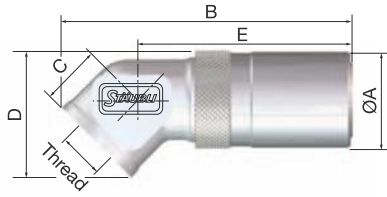
Test conditions:

- Water
- Density: 998 kg/m³
- Viscosity: 1.08 cSt
- Direction of flow: socket → plug

Part-numbers

Sockets

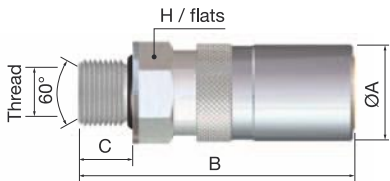
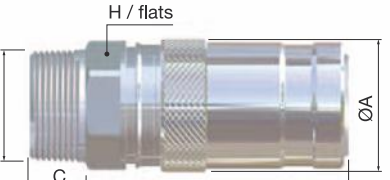
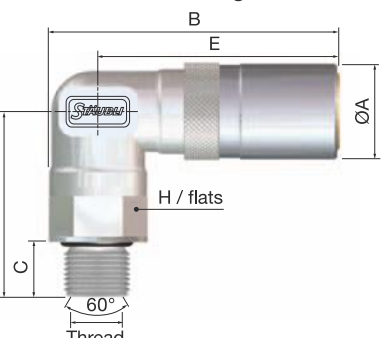
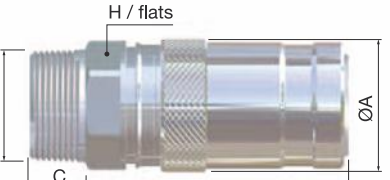
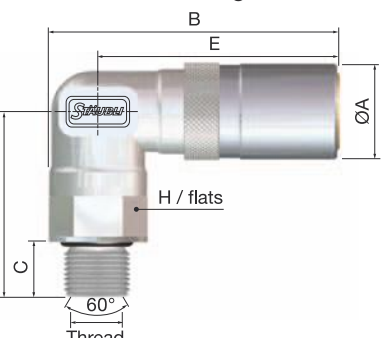
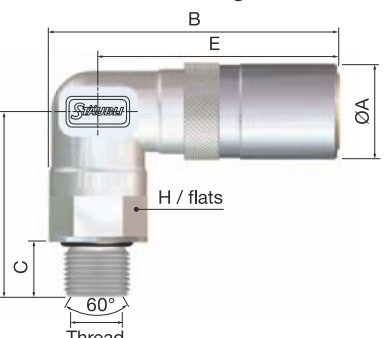
Designation	Models	Dimensions (mm)						Part-numbers
		Ø	ØA	B	C	D	E	
1. Socket with shut-off valve for rubber hoses   Ø = hose internal diameter (mm)	RMI 06	8	19	60	23			RMI 06.1808/JV
	RMI 09	12	25	68	28			RMI 09.1812/JV
	RMI 12	16	31	82	28			RMI 12.1816/JV
	RMI 16	19	38	108.5	33			RMI 16.1819/JV
2. Socket 90° with shut-off valve for rubber hoses   Ø = hose internal diameter (mm)	RMI 06	8	19	57.5	23	40	48	RMI 06.1808/JV/RE
	RMI 09	10	25	65.5	23	47	54.5	RMI 09.1810/JV/RE
		12	25	65.5	28	55	54.5	RMI 09.1812/JV/RE
3. Socket 135° with shut-off valve for rubber hoses   Ø = hose internal diameter (mm)	RMI 06	8	19	71.5	23	14	42.5	RMI 06.1808/JV/RO

Designation	Models	Dimensions (mm)							Part-numbers
		Thread	ØA	B	C	H/flats	D	E	
4. Socket with shut-off valve female thread  	RMI 06	 G 1/4	19	46		17			RMI 06.1101/JV
		NPT 1/4	19	45		17			RMI 06.1201/JV
	RMI 09	 G 3/8	25	53.5		22			RMI 09.1102/JV
		NPT 3/8	25	51.5		22			RMI 09.1202/JV
	RMI 12	 G 1/2	31	67		27			RMI 12.1103/JV
		NPT 1/2	31	65		27			RMI 12.1203/JV
	RMI 16	 G 3/4	38	90.5		35			RMI 16.1104/JV
		NPT 3/4	38	88.5		35			RMI 16.1204/JV
	RMI 20	 G 3/4	52	117		42			RMI 20.1104/JV ⁽¹⁾
		 G 1	52	117		42			RMI 20.1105/JV ⁽¹⁾
		NPT 1	52	117		42			RMI 20.1205/JV ⁽¹⁾
	RMI 25	 G 1	58	137		50			RMI 25.1105/JV ⁽¹⁾
		 G 1 1/4	58	137		50			RMI 25.1106/JV ⁽¹⁾
		NPT 1 1/4	58	137		50			RMI 25.1206/JV ⁽¹⁾
	RMI 37	 G 2	105	139.5		75			RMI 37.1108/JV
		NPT 2	105	172		75			RMI 37.1208/JV
5. Socket 90° with shut-off valve female thread  	RMI 06	 G 1/4	19	57.5			15	48	RMI 06.1101/JV/RE
		NPT 1/4	19	57.5			15	48	RMI 06.1201/JV/RE
	RMI 09	 G 3/8	25	65.5			20	54.5	RMI 09.1102/JV/RE
		NPT 3/8	25	65.5			20	54	RMI 09.1202/JV/RE
	RMI 12	 G 1/2	31	81.5			25	68	RMI 12.1103/JV/RE
		NPT 1/2	31	81.5			25	67	RMI 12.1203/JV/RE
6. Socket 135° with shut-off valve female thread  	RMI 06	 G 1/4	19	58	12		25	42.5	RMI 06.1101/JV/RO

(1) Shoulder locking ring: see page 13

Part-numbers

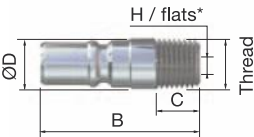
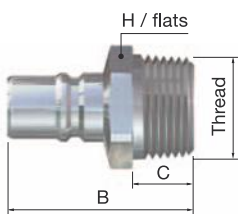
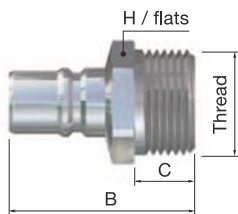
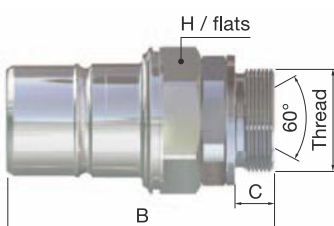
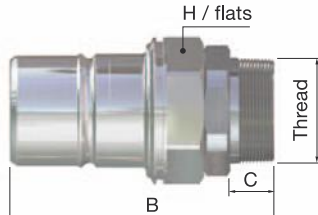
Sockets

Designation	Models	Dimensions (mm)							Part-numbers
		Thread	ØA	B	C	H/flats	D	E	
7. Socket with shut-off valve cylindrical BSP male thread delivered with KES sealing  	RMI 06	G 1/4 60° cone	19	55	10	17			RMI 06.1151/JV
	RMI 09	G 3/8 60° cone	25	61	10	22			RMI 09.1152/JV
	RMI 12	G 1/2 60° cone	31	72	12	27			RMI 12.1153/JV
	RMI 16	G 3/4 60° cone	38	90.5	14	35			RMI 16.1154/JV
8. Socket with shut-off valve NPT male thread  	RMI 20	G 1 60° cone	52	129	17.5	42			RMI 20.1155/JV ⁽¹⁾
	RMI 25	G 1 1/4 60° cone	58	139	18.5	50			RMI 25.1156/JV ⁽¹⁾
9. Socket 90° with shut-off valve cylindrical BSP male thread delivered with KES sealing  	RMI 37	G 1 1/2 60° cone	105	208	21	70			RMI 37.1157/JV
		G 2 60° cone	105	212	25	70			RMI 37.1158/JV
8. Socket with shut-off valve NPT male thread  	RMI 25	NPT 1 1/2	58	143.5	24.5	50			RMI 25.1257/JV ⁽¹⁾
9. Socket 90° with shut-off valve cylindrical BSP male thread delivered with KES sealing  	RMI 37	NPT 1 1/2	105	211	24.5	70			RMI 37.1257/JV
		NPT 2	105	212	25.5	70			RMI 37.1258/JV
9. Socket 90° with shut-off valve cylindrical BSP male thread delivered with KES sealing  	RMI 06	G 1/4 60° cone	19	58	9	17	34	48	RMI 06.1151/JV/RE
	RMI 09	G 3/8 60° cone	25	66.5	10	21	40	54.5	RMI 09.1152/JV/RE
	RMI 12	G 1/2 60° cone	31	81.5	12	27	47	68	RMI 12.1153/JV/RE

(1) Shoulder locking ring: see page 13

Part-numbers

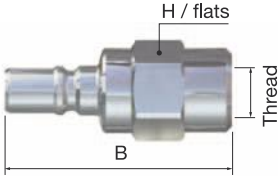
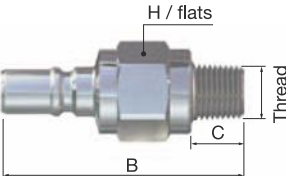
Plugs

Designation	Models	Dimensions (mm)					Part-numbers
		Thread	B	C	H/flats	Ø D	
1. Straight-through plug • taper male thread  * plugs fully recessed	RMI 06	R 1/8	31	7.5	5	10	RMI 06.6160
		NPT 1/8	31	10	5	11	RMI 06.6250
		R 1/4	35	13	5	14	RMI 06.6161
		NPT 1/4	35	13	5	14	RMI 06.6251
	RMI 09	R 1/4	33	10	8	14	RMI 09.6161
		NPT 1/4	34	11	8	14	RMI 09.6251
		R 3/8	36	11	8	17	RMI 09.6162
		NPT 3/8	36	11	8	17	RMI 09.6252
	RMI 12	R 3/8	39	13	10	18	RMI 12.6162
	RMI 12	NPT 3/8	64.5	13	24		RMI 12.6252
		R 1/2	44	16	22		RMI 12.6163
		NPT 1/2	44	16	22		RMI 12.6253
	RMI 16	R 3/4	63	16.5	27		RMI 16.6164
• cylindrical male thread 	RMI 09	G 1/2	37	12	22		RMI 09.6153
	RMI 12	G 3/4	46	16	27		RMI 12.6154
	RMI 37	 G 1 1/2 60° cone	149	21	70		RMI 37.6157
		 G 2 60° cone	153	25	70		RMI 37.6158
• NPT male thread 	RMI 37	NPT 1 1/2	152.5	24.5	70		RMI 37.6257
		NPT 2	153.5	25.5	70		RMI 37.6258

Part-numbers

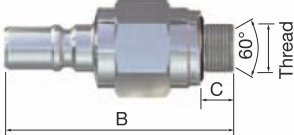
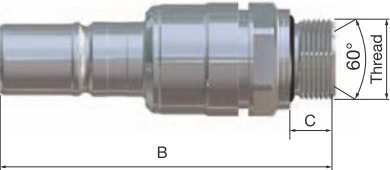
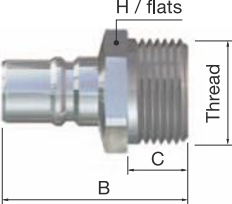
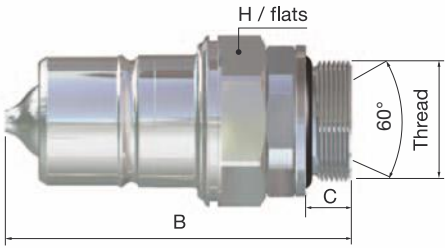
Plugs

Designation	Models	Dimensions (mm)					Part-numbers
		Ø or Thread	B	C	H/flats	Ø D	
2. Straight-through plug female thread Assembly with 2 parts → Assembly with 2 parts →	RMI 06	G 1/4	34		17		RMI 06.6101
		NPT 1/4	47		17		RMI 06.6201
	RMI 09	G 3/8	37		22		RMI 09.6102
		NPT 3/8	49		22		RMI 09.6202
	RMI 12	G 1/2	45		27		RMI 12.6103
		NPT 1/2	67		27		RMI 12.6203
	RMI 16	G 3/4	58		32		RMI 16.6104
		NPT 3/4	80		32		RMI 16.6204
 * plugs fully recessed	RMI 09	G 1/4	41		8	17.5	RMI 09.6101
	RMI 20	G 1	92		41		RMI 20.6105
	RMI 25	G 1	100		41		RMI 25.6105
	RMI 37	G 2	113		75		RMI 37.6108
		NPT 2	113		75		RMI 37.6208
3. Straight through plug for rubber hoses Ø = hose internal diameter (mm)	RMI 16	19	65	28.5			RMI 16.6819

Designation	Models	Dimensions (mm)					Part-numbers
		Thread	B	C	H/flats	Ø D	
4. Self-sealing plug female thread 	RMI 06	 G 1/4	47		17		RMI 06.7101/JV
		NPT 1/4	47		17		RMI 06.7201/JV
	RMI 09	 G 1/4	48.5		19		RMI 09.7101/JV
		NPT 1/4	48.5		19		RMI 09.7201/JV
		 G 3/8	49		22		RMI 09.7102/JV
	RMI 12	NPT 1/2	85		27		RMI 12.7203/JV
	RMI 16	 G 3/4	81		32		RMI 16.7104/JV
		NPT 3/4	81		32		RMI 16.7204/JV
	RMI 20	 G 3/4	126.5		42		RMI 20.7104/JV
		 G 1	126.5		42		RMI 20.7105/JV
		NPT 1	129.5		42		RMI 20.7205/JV
	RMI 25	 G 1	148.5		50		RMI 25.7105/JV
		 G 1 1/4	148.5		50		RMI 25.7106/JV
		NPT 1 1/4	145.5		50		RMI 25.7206/JV
5. Self-sealing plug NPT male thread 	RMI 06	NPT 1/8	46	10	17		RMI 06.7250/JV
		NPT 1/4	46	11	17		RMI 06.7251/JV
	RMI 09	NPT 1/4	52	13	19		RMI 09.7251/JV
		NPT 3/8	48.5	13	19		RMI 09.7252/JV
	RMI 12	NPT 3/8	62	13	24		RMI 12.7252/JV
		NPT 1/2	62	15	24		RMI 12.7253/JV
	RMI 16	NPT 3/4	81	19	32		RMI 16.7254/JV
	RMI 25	NPT 1 1/2	156	24.5	50		RMI 25.7257/JV
	RMI 37	NPT 1 1/2	169	24.5	70		RMI 37.7257/JV
		NPT 2	170	25.5	70		RMI 37.7258/JV

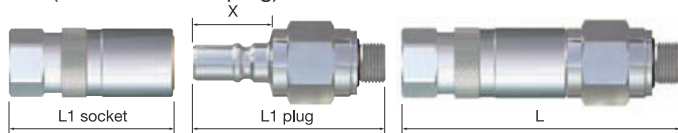
Part-numbers

Plugs

Designation	Models	Dimensions (mm)					Part-numbers
		Thread	B	C	H/flats	Ø D	
6. Self-sealing plug cylindrical BSP male thread delivered with KES sealing 	RMI 06	G 1/8 60° cone	45	7	17		RMI 06.7150/JV
		G 1/4 60° cone	45	9	17		RMI 06.7151/JV
	RMI 09	G 1/4 60° cone	51	9	19		RMI 09.7151/JV
		G 3/8 60° cone	48	10	20		RMI 09.7152/JV
	RMI 12	G 3/8 60° cone	63.5	10	24		RMI 12.7152/JV
		G 1/2 60° cone	62	12	24		RMI 12.7153/JV
	RMI 16	G 3/4 60° cone	81	14	32		RMI 16.7154/JV
	RMI 20	G 1 60° cone	138.5	17.5	42		RMI 20.7155/JV
	RMI 25	G 1 1/4 60° cone	151.5	18.5	50		RMI 25.7156/JV
7. Self-sealing plug cylindrical BSP male thread 	RMI 09	G 1/2	37	12	22		RMI 09.7153/JV
	RMI 12	G 3/4	46	16	27		RMI 12.7154/JV
	RMI 16	G 1	62	24	32		RMI 16.7155/JV
8. Self-sealing plug cylindrical BSP male thread delivered with KES sealing 	RMI 37	G 1 1/2 60° cone	165.5	21	70		RMI 37.7157/JV
		G 2 60° cone	169.5	25	70		RMI 37.7158/JV

Overall length in coupled position

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



Model	X (mm)
RMI 06	17.5
RMI 09	18.5
RMI 12	23
RMI 16	30

Model	X (mm)
RMI 20	60
RMI 25	69.6
RMI 37 double shut-off	97
RMI 37 single shut-off	81



RMI 09 bridge pieces

For an even more increased rationalization of your assemblies:

- reduction in the number of flow meters and reduced size
- ease of maintenance and flexibility of assembly

Model

RMI 09

Tube, length 1 meter

Part-numbers

RMI 09.1000/RE/JV

R 113 910 00

A bridge is composed of:

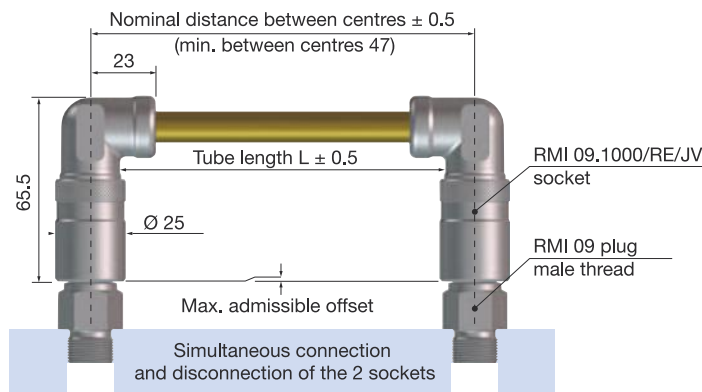
- 2 RMI 09.1000/RE/JV sockets
- 1 rigid tube

Tube preparation

Tube length $L = (\text{nominal distance between centres} - 20) \pm 0.5$

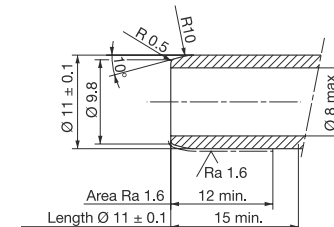
E.g.: for a nominal distance of 100 mm:

$$L = (100 - 20) \pm 0.5 = 80 \pm 0.5$$



Max. admissible offset = nominal distance between centres x 0.02

Machining of the ends



Options

Sealing

Ethylene-Propylene (EPDM), Nitrile (NBR) and Perfluoroelastomer (FFKM) seals are available on all models.

Replace the code JV by the corresponding code in the socket and plug part-numbers:

JE: Ethylene-Propylene seals

No code: Nitrile seals

JKV: Perfluoroelastomer seals (in the fluid jet)

Protective dust-caps



- For RMI 09 to RMI 25 plugs. Plugs dust cap part-numbers: RMI xx.8550
- For RMI 20 and RMI 25 sockets. Socket dust-cap part-numbers: RMI xx.8500

Max. working temperature: 100 °C

Replace xx with the passage flow diameter of the socket or plug.

E.g.: RMI 16.8550 = 16 mm passage flow diameter plug dust cap

Coloured rings



For RMI 20, 25 and 37 models.

Add the corresponding colour code to the part-numbers of the sockets and plugs:

KB: blue ring

KR: red ring

E.g.: RMI 25.1156/JV/KB - RMI 25.7156/JV/KB

Shoulder locking ring



RMI 20 and RMI 25 sockets: add the **VP** code to the part-numbers pages 7 and 8.

RMI 37 sockets equipped as standard with a shoulder locking ring.

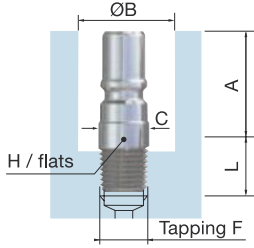
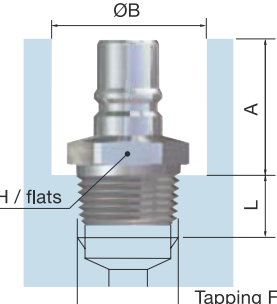
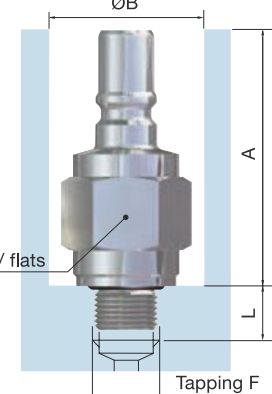
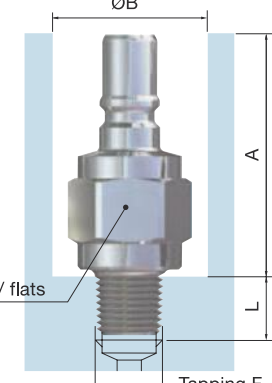
Rubber protection



For RMI 37 sockets.

Add the code **PR** to RMI 37 socket part-numbers.

Dimensions for recessed installation

Designation	Models	Dimensions (mm)				C	H/flats (hexagon)	Part-numbers	
		Required tapping	A	ØB	L mini				
1. Installation of fully recessed straight-through plugs, taper male thread 	RMI 06	G 1/8 or Rc 1/8	26	20	9	Ø 10	5	RMI 06.6160	
		NPT 1/8	28	20	9	Ø 11	5	RMI 06.6250	
		G 1/4 or Rc 1/4	27	20	12	Ø 14	5	RMI 06.6161	
		NPT 1/4	27	20	13	Ø 14	5	RMI 06.6251	
	RMI 09	G 1/4 or Rc 1/4	26	26	12	Ø 14	8	RMI 09.6161	
		NPT 1/4	26	26	13	Ø 14	8	RMI 09.6251	
		G 3/8 or Rc 3/8	28	26	13	Ø 17	8	RMI 09.6162	
		NPT 3/8	28	26	13	Ø 17	8	RMI 09.6252	
	RMI 12	G 3/8 or Rc 3/8	31	33	13	Ø 18	10	RMI 12.6162	
		RMI 12	NPT 3/8	55	36	11		24	RMI 12.6252
G 1/2 or Rc 1/2			34	33	15		22	RMI 12.6163	
NPT 1/2			34	33	15		22	RMI 12.6253	
RMI 16		G 3/4 or Rc 3/4	50	40	19		27	RMI 16.6164	
2. Installation of fully recessed self-sealing plugs, cylindrical BSP male thread 		RMI 06	G 1/8	41	26	9		17	RMI 06.7150/JV
	G 1/4		38	26	12		17	RMI 06.7151/JV	
	RMI 09	G 1/4	44	29	12		19	RMI 09.7151/JV	
		G 3/8	40	29	13		20	RMI 09.7152/JV	
	RMI 12	G 3/8	56	36	13		24	RMI 12.7152/JV	
		G 1/2	52	36	15		24	RMI 12.7153/JV	
	RMI 16	G 3/4	70	46	16		32	RMI 16.7154/JV	
	3. Installation of fully recessed self-sealing plugs, NPT male thread 	RMI 06	NPT 1/8	42	26	9		17	RMI 06.7250/JV
			NPT 1/4	38	26	13		17	RMI 06.7251/JV
		RMI 09	NPT 1/4	44	29	13		19	RMI 09.7251/JV
NPT 3/8			40	29	13		19	RMI 09.7252/JV	
RMI 12		NPT 3/8	56	36	13		24	RMI 12.7252/JV	
		NPT 1/2	52	36	15		24	RMI 12.7253/JV	
RMI 16		NPT 3/4	70	46	16		32	RMI 16.7254/JV	



The Stäubli capability for fluid regulation

Centralised circuit connections

Stäubli offers a standard range of multi-couplings based on the same technology as the RMI mono-couplings.

- **4 families**
- **4 coupling diameters**
- **Up to 10 inlets / 10 outlets** combined in a single compact system.

Ø 6 mm > RMI 206

Ø 9 mm > RMI 209

Ø 12 mm > RMI 212

Ø 16 mm > RMI 216



Flexible hoses

For equipping your cooling circuits Stäubli can offer you a complete selection of flexible hoses specially dedicated to your application:

- **CALOREL-EC:**
EPDM hose for hot and cold water circuits
- **CALOREL-S:**
Rubber hose for hot oil circuits
- **CALORLOCK:**
NBR / PVC hose self-locking flexible hose for water circuits ...

You will find all detailed technical data concerning this range in our leaflet "Flexible hoses for all fluids" (N 210).



We reserve the right to modify product specifications without prior notice.

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



Global presence of the Stäubli Group

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- Agents

International sales coordination

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