

# RPL quick release couplings

Temperature control | Full flow



# The full flow solution...



**Ball-locking mechanism**  
Automatic



US 7 503 592  
and other countries





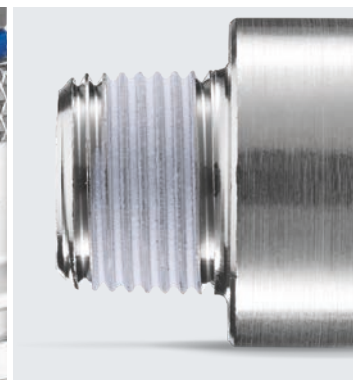
**Knurling**  
Ergonomic knurled ring



**Coloured ring**  
Circuit identification using different colours



**Original parts**  
Always use original Stäubli parts



**PTFE-coating**  
For perfect sealing

# ... economical and effective

## Applications

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

## Ergonomic connection and disconnection

The knurled locking ring makes it easy to grip the plug and one handed connections and disconnections are possible. For difficult to reach locations, a shoulder (RPL 08 and RPL 12 mm) or a groove (RPL 06 mm) can be situated on the locking ring to enable access.

## Immediate sealing

The male threaded straight sockets are PTFE-coated and guarantee immediate sealing of connections (screwdriver, etc.).

## Quick and easy circuit identification

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



**Coloured ring not visible** = connection incomplete.



**Coloured ring visible** = connection complete. Blue **/KB**, red **/KR** or black ring.

## Secure locking

The robust locking system ensures a perfect seal on circuits. The locked position can be visually checked due to the coloured ring on the plug.

## 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

# 3 diameters and over 300 variations to cover all your requirements

With three flow diameters, the RPL range offers solutions for temperature control of moulds whatever the flow.



RPL 06



RPL 08



RPL 12

# Simple integration

Suitable for both existing and new moulds

On new moulds



**Flush fitting**

- Easy mould storage
- No risk of damage to sockets

On existing moulds



**Slightly raised fitting**

**Extension options**

In nickel-plated brass, smooth or threaded, these robust, rigid, one-piece extension sockets are easily fitted onto moulds. The one-piece construction offers high strength and rigidity.

Available in various lengths, they are suitable for all your installations and different configurations.



**Threaded finish (RPL 08):**

- 3 available lengths in G 1/8
- 4 available lengths in G 1/4

**Smooth finish:**

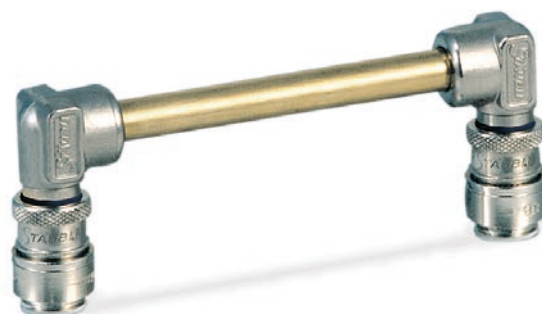
- RPL 06: 1 length
- RPL 08: 4 lengths
- RPL 12: 3 lengths

# Streamlined circuits

**Bridge options**

Bridge pieces comprise two non-threaded RPL 08 plugs and a calibrated cold-drawn brass tube.

These options can be used to reduce the size of installations whilst also simplifying maintenance operations. In addition, the flexible design compensates for any misalignments when assembling.



# Technical specifications



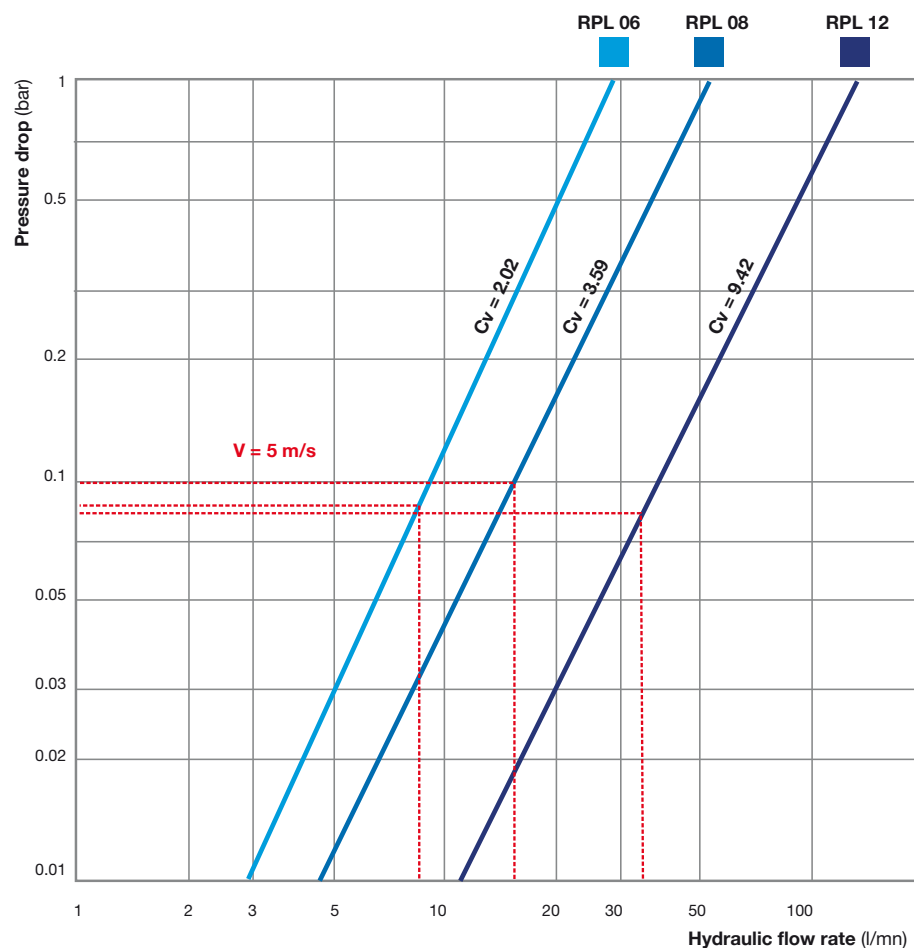
	RPL 06	RPL 08	RPL 12
<b>Nominal diameter DN (mm)</b>	6	8	12
<b>Maximum allowable pressure PS (bar)</b>	10	10	10
<b>Minimum and maximum allowable temperatures TS (°C)</b>	-15 and +90*	-15 and +90*	-15 and +90*

\*For other conditions, please ask us.

## Construction

- Nickel plated brass socket, with PTFE pre-applied (straight male threaded sockets)
- Nickel plated brass plug and extension
- Nitrile (NBR) seal and other seals available to order
- 18/8 stainless steel spring and balls
- RPL 06: 6 balls  
RPL 08 and 12: 8 balls

Flow rate / pressure drop hydraulic charts



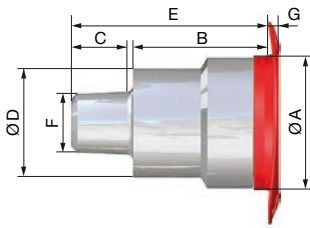
Test conditions:

- Water (density 998 kg/m<sup>3</sup>, viscosity 1,08 cSt)
- Flow direction: socket → plug



# Part numbers

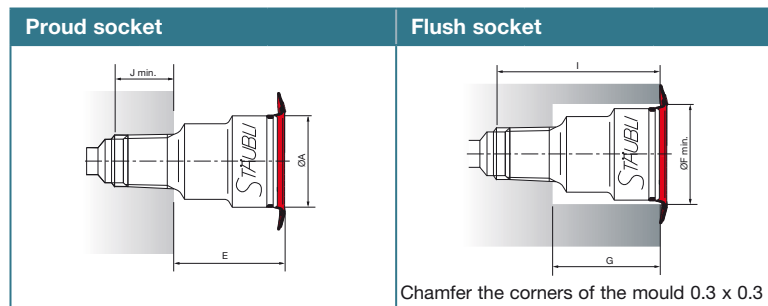
Straight socket male thread,  
PTFE pre-applied\*



R 1/8\* = G 1/8 co.

Model	F thread	Dimensions (mm)							Part numbers without coloured ring
		ØA	B	C	ØD	E	G	Allen key	
RPL 06	R 1/8	17	18.5	7.5	14	28.5	1.5	6	RPL06.1150
	NPT 1/8	17	18.5	7	14	28.5	1.5	6	RPL06.1250
	R 1/4	17	15.5	11	14	28.5	1.5	6	RPL06.1151
	NPT 1/4	17	-	11	-	29.5	1.5	6	RPL06.1251
RPL 08	R 1/8	21	22	8	17.5	32	1.5	6	RPL08.1150
	NPT 1/8	21	22	7	17.5	32	1.5	1/4"	RPL08.1250
	R 1/4	21	21	10	17.5	33	1.5	8	RPL08.1151
	NPT 1/4	21	21	11	17.5	33	1.5	5/16"	RPL08.1251
	R 3/8	21	11	11	-	24	1.5	8	RPL08.1152
	NPT 3/8	21	11	11	-	24	1.5	5/16"	RPL08.1252
RPL 12	R 3/8	32	28	11	25	41	2	10	RPL12.1152
	NPT 3/8	32	28	11	25	41	2	3/8"	RPL12.1252
	R 1/2	32	28	14	25	44	2	14	RPL12.1153
	NPT 1/2	32	28	14	25	44	2	9/16"	RPL12.1253
	R 3/4	32	13	16.5	-	32	2	14	RPL12.1154
	NPT 3/4	32	13	14	-	32	2	9/16"	RPL12.1254

Installation dimensions  
for the socket in the mould



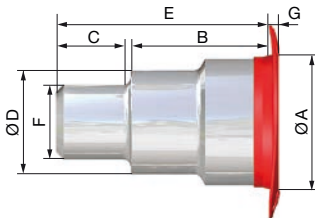
Model	Tapping	ØA	E	J min.	ØF min.	G	I	Allen key
RPL 06	G 1/8	17	20	10	18.5	20.5	29.5	6
	NPT 1/8	17	22	10	18.5	22.5	31.5	1/4"
	G 1/4	17	18	13	18.5	18.5	30.5	6
	NPT 1/4	17	20	13.5	18.5	20.5	33	1/4"
RPL 08	G 1/8	21	23	10	22.5	24	33	6
	NPT 1/8	21	25.5	10	22.5	25.5	35	1/4"
	G 1/4	21	22	12	22.5	23	34	8
	NPT 1/4	21	24	12	22.5	23.5	35.5	5/16"
	G 3/8	21	12	13	22.5	13	25	8
	NPT 3/8	21	14	13	22.5	14	27	5/16"
RPL 12	G 3/8	32	29	13	33.5	30	42	10
	NPT 3/8	32	33	13	33.5	33	46	3/8"
	G 1/2	32	30	15	33.5	31	45	14
	NPT 1/2	32	35	15	33.5	34.5	51	9/16"
	G 3/4	32	15	18	33.5	20	36	14
	NPT 3/4	32	17.5	18	33.5	17.5	36.5	9/16"

\* With blue ring add **/KB** to the part number, with red ring add **/KR** to the part number



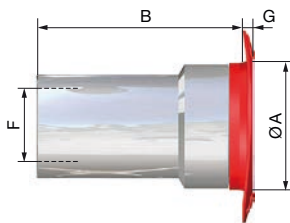
# Part numbers

## Straight socket metric male thread\*



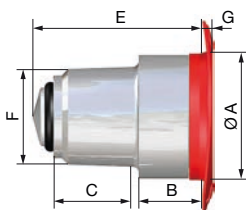
Model	F thread	Dimensions (mm)							Part numbers without coloured ring
		ØA	B	C	ØD	E	G	Allen key	
RPL 06	M 10x1	17	18.5	8	14	28.5	1.5	6	RPL06.1410
	M 10x1	21	22	8	17.5	32	1.5	6	RPL08.1410
RPL 08	M 10x1.5	21	22	8	17.5	32	1.5	6	RPL08.1411
	M 14x1.5	21	21	8	17.5	32	1.5	8	RPL08.1414

## Straight socket female thread\*



Model	F thread	Dimensions (mm)				Part numbers without coloured ring
		ØA	B	G	Allen key	
RPL 08	G 1/8	21	35	1.5	6	RPL08.1100
	NPT 1/8	21	35	1.5	1/4"	RPL08.1200
	G 1/4	21	39	1.5	8	RPL08.1101
	NPT 1/4	21	39	1.5	5/16"	RPL08.1201
RPL 12	G 3/8	32	49	1.5	12	RPL12.1102
	G 1/2	32	50	1.5	12	RPL12.1103

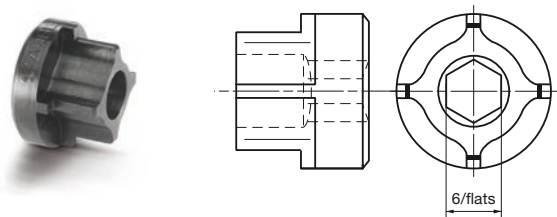
## Straight valved socket male thread\*



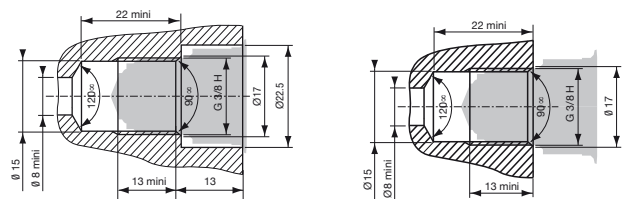
Model	F thread	Dimensions (mm)					Part numbers without coloured ring
		ØA	B	C	E	G	
RPL 08	R 3/8	21	11	15	28	1.5	RPL08.1152/ON/JV

## Installation tool for RPL 08/ON sockets

Part number: **RPL08.9000**



## Installation dimensions for the RPL 08/ON socket in the mould



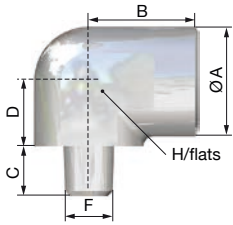
Flush socket

Raised socket

\* With blue ring add **/KB** to the part number, with red ring add **/KR** to the part number

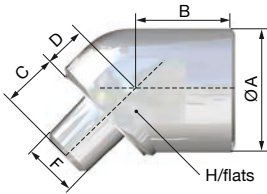
# Part numbers

## Socket 90° male thread



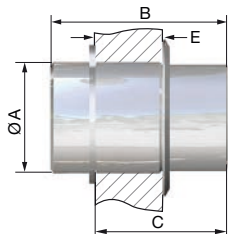
Model	F thread	Dimensions (mm)					Part numbers
		ØA	B	C	D	H/flats	
RPL 08	R 1/8	22	22	10	13	19	RPL08.1150/RE
	R 1/4	22	22	12	13	19	RPL08.1151/RE
	NPT 1/4	22	22	14	13	19	RPL08.1251/RE
	R 3/8	22	22	13	13	19	RPL08.1152/RE

## Socket 135° male thread



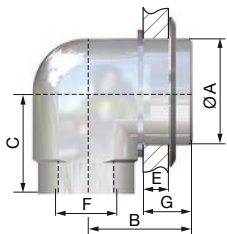
Model	F thread	Dimensions (mm)					Part numbers
		ØA	B	C	D	H/flats	
RPL 08	R 1/8	22	18.5	10	6.5	19	RPL08.1150/RO
	R 1/4	22	18.5	12	4.5	19	RPL08.1151/RO
	R 3/8	22	18.5	12	4.5	19	RPL08.1152/RO

## Bulkhead union



Model	Dimensions (mm)				Part numbers
	ØA	B	C	E	
RPL 08	22	35	26	10 max.	RPL08.2000

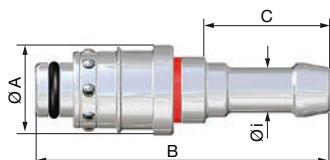
## 90° female threaded bulkhead union



Model	F thread	Dimensions (mm)					Part numbers
		ØA	B	C	E	G	
RPL 08	G 1/4	22	22	21	6.5 max.	10	RPL08.2101/RE

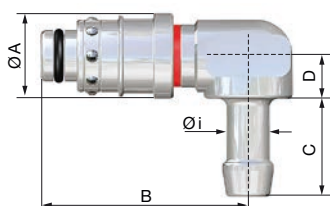
# Part numbers

Straight plug for hose\*



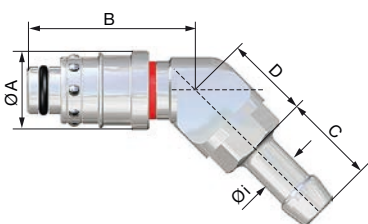
Model	Dimensions (mm)				Part numbers with a black ring
	Øi	ØA	B	C	
RPL 06	Ø 8	17	55	23	RPL06.6808
	Ø 6	20	66	28	RPL08.6806
RPL 08	Ø 8	20	66	28	RPL08.6808
	Ø 10	20	66	28	RPL08.6810
	Ø 12.5	20	66	28	RPL08.6812
RPL 12	Ø 13	28	78	33	RPL12.6813
	Ø 16	28	78	33	RPL12.6816

Plug 90° for hose\*



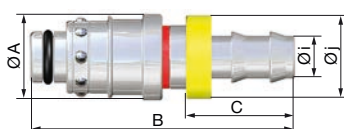
Model	Dimensions (mm)					Part numbers with a black ring
	Øi	ØA	B	C	D	
RPL 08	Ø 6	20	48.5	28	23.5	RPL08.6806/RE
	Ø 8	20	48.5	23	23.5	RPL08.6808/RE
	Ø 10	20	48.5	23	10	RPL08.6810/RE
	Ø 12.5	20	48.5	28	10	RPL08.6812/RE
RPL 12	Ø 13	28	75.5	33	27	RPL12.6813/RE
	Ø 16	28	75.5	33	27	RPL12.6816/RE

Plug 135° for hose\*



Model	Dimensions (mm)					Part numbers with a black ring
	Øi	ØA	B	C	D	
RPL 08	6	20	43	28	21	RPL08.6806/RO
	8	20	43	23	21	RPL08.6808/RO
	10	20	43	23	21	RPL08.6810/RO
	12.5	20	43	28	21	RPL08.6812/RO
RPL 12	13	28	72	33	24	RPL12.6813/RO
	16	28	72	33	24	RPL12.6816/RO

Straight plug for self-locking hose\*

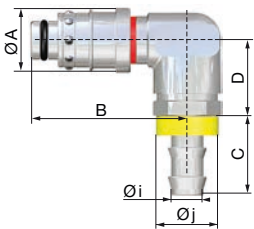


Model	Dimensions (mm)					Part numbers with a black ring
	Øi	ØA	B	C	Øj	
RPL 08	3/8"	20	62	24.5	19.5	RPL08.6810/CN
	1/2"	20	69	29	24.5	RPL08.6813/CN
RPL 12	1/2"	28	74	29	24.5	RPL12.6813/CN
	5/8"	28	81.5	36.5	27	RPL12.6816/CN

\* With blue ring add **/KB** to the part number, with red ring add **/KR** to the part number

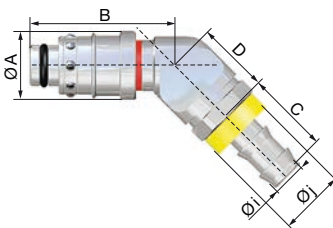
# Part numbers

Plug 90° for self-locking hose\*



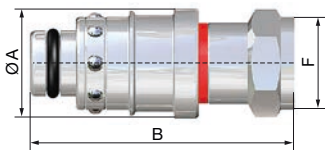
Model	Dimensions (mm)						Part numbers with a black ring
	Øi	ØA	B	C	D	Øj	
RPL 08	3/8"	20	48.5	24.5	23.5	19.5	RPL08.6810/CN/RE
	1/2"	20	48.5	29	25.5	24.5	RPL08.6813/CN/RE
RPL 12	1/2"	28	75.5	29	30.5	24.5	RPL12.6813/CN/RE
	5/8"	28	75.5	36.5	30	27	RPL12.6816/CN/RE

Plug 135° for self-locking hose\*



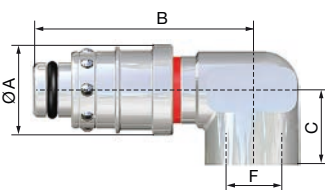
Model	Dimensions (mm)						Part numbers with a black ring
	Øi	ØA	B	C	D	Øj	
RPL 08	3/8"	20	43	24.5	21	19.5	RPL08.6810/CN/RO
	1/2"	20	43	29	23	24.5	RPL08.6813/CN/RO
RPL 12	1/2"	28	72	29	27.5	24.5	RPL12.6813/CN/RO
	5/8"	28	72	36.5	27	27	RPL12.6816/CN/RO

Straight plug female threaded\*



Model	Dimensions (mm)			Part numbers with a black ring
	F thread	ØA	B	
RPL 08	G 1/4	20	48.5	RPL08.6101
	NPT 1/4	20	48.5	RPL08.6201
RPL 12	G 1/2	28	61	RPL12.6103
	NPT 1/2	28	63	RPL12.6203

Plug 90° female threaded\*

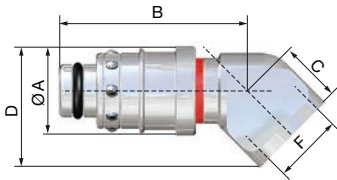


Model	F thread	Dimensions (mm)			Part numbers with a black ring
		ØA	B	C	
RPL 08	G 1/4	20	48.5	16.5	RPL08.6101/RE
	NPT 1/4	20	60.5	15	RPL08.6201/RE
RPL12	G 3/8	28	75.5	20	RPL12.6102/RE
	NPT 3/8	28	75.5	20	RPL12.6202/RE

\* With blue ring add **/KB** to the part number, with red ring add **/KR** to the part number

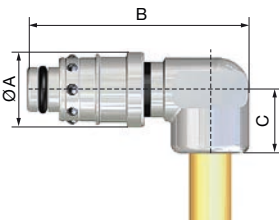
# Part numbers

## Plug 135° female threaded\*

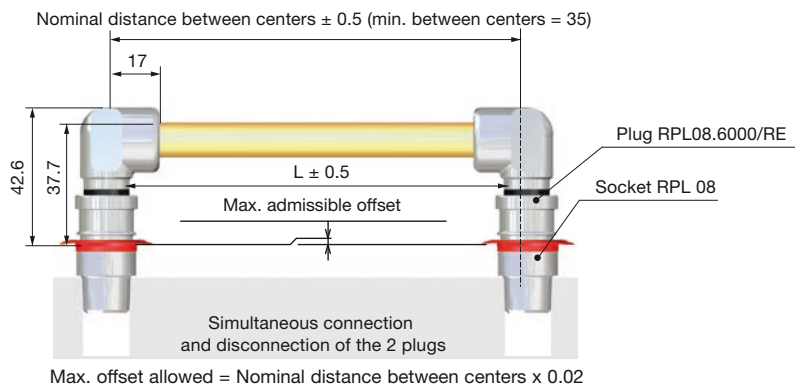


Model	F thread	Dimensions (mm)				Part numbers with a black ring
		ØA	B	C	D	
RPL 08	G 1/4	20	43	14	27.5	RPL08.6101/RO
	NPT 1/4	20	57.5	13.5	27.5	RPL08.6201/RO
RPL12	G 3/8	28	72	17	33	RPL12.6102/RO
	NPT 3/8	28	72	17	33	RPL12.6202/RO

## RPL 08 Bridge



Model	Dimensions (mm)			Part numbers with a black ring
	ØA	B	C	
RPL 08 90° plug	20	59	17	RPL08.6000/RE
Tube	Tube, supply length = 1 m			R113 910 00



## Tube preparation

Tube length:

$$L = (\text{Nominal distance between centers} - 10) \pm 0.5$$

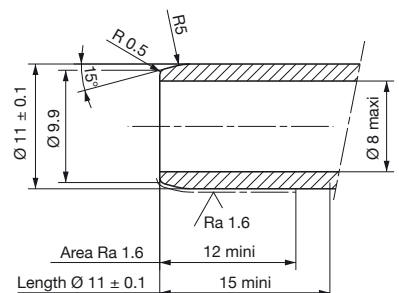
E.g.: if the nominal distance between centers

$$\text{is } 100 \text{ mm, } L = (100 - 10) \pm 0.5 = 90 \pm 0.5$$

Pipe supplied in 1 m length to be adapted

to your needs.

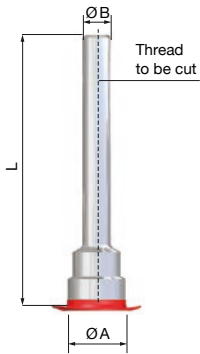
## Machining of the ends



\* With blue ring add **/KB** to the part number, with red ring add **/KR** to the part number

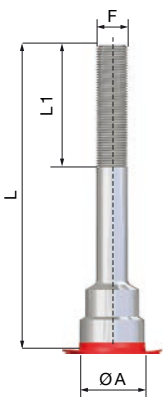
# Part numbers

Monobloc extended sockets: smooth finish\*



Model	Thread to be cut	Dimensions (mm)								Part numbers
		L min. / max.	ØA	ØB	L2	G	ØC	ØF min.	H/ flats	
RPL 06	R 1/8 or NPT 1/8	33/100	17	10.2	L-5.5	20	11	18.5	6	RPL06.1010/100/R
		100/150	17	10.2	L-5.5	20	11	18.5	6	RPL06.1010/150/R
RPL 08	R 1/8 or NPT 1/8	33/100	21	10.2	L-5.5	23	11	22.5	6	RPL08.1010/100/R
		100/150	21	10.2	L-5.5	23	11	22.5	6	RPL08.1010/150/R
		150/200	21	10.2	L-5.5	23	11	22.5	6	RPL08.1010/200/R
	R 1/4 or NPT 1/4	200/250	21	10.2	L-5.5	23	11	22.5	6	RPL08.1010/250/R
		34/100	21	13.5	L-7.5	23	14	22.5	8	RPL08.1011/100/R
		100/150	21	13.5	L-7.5	23	14	22.5	8	RPL08.1011/150/R
RPL 12	R 3/8 or NPT 3/8	150/200	21	13.5	L-7.5	23	14	22.5	8	RPL08.1011/200/R
		200/250	21	13.5	L-7.5	23	14	22.5	8	RPL08.1011/250/R
		56/150	32	17.2	L-8.5	43	18	33.5	14	RPL12.1002/150/R
	R 1/2 or NPT 1/2	150/200	32	17.2	L-8.5	43	18	33.5	14	RPL12.1002/200/R
		200/250	32	17.2	L-8.5	43	18	33.5	14	RPL12.1002/250/R
		59/150	32	21.3	L-11.5	45	22	33.5	14	RPL12.1003/150/R
R 1/2 or NPT 1/2	150/200	32	21.3	L-11.5	45	22	33.5	14	RPL12.1003/200/R	
	200/250	32	21.3	L-11.5	45	22	33.5	14	RPL12.1003/250/R	

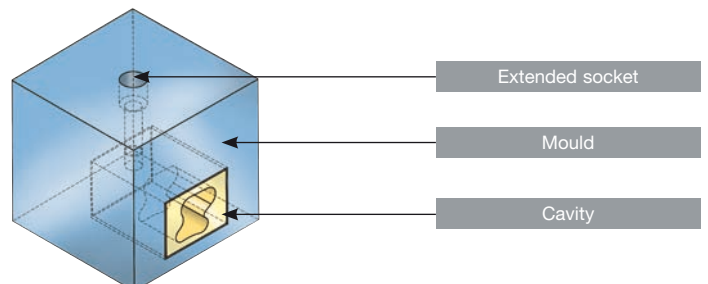
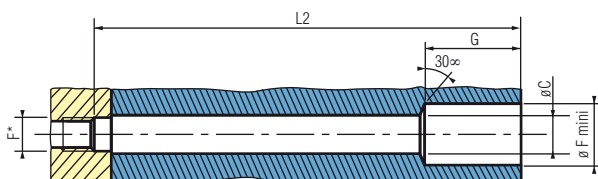
Monobloc extended sockets: threaded finish\*



Model	Thread	Dimensions (mm)								Part numbers
		L min. / max.	L 1 threaded	ØA	L2	G	ØC	ØF min.	H/ flats	
RPL 08	G 1/8	34/50	26	21	L-5.5	23	11	22.5	6	RPL08.1010/50/RF
		50/100	60	21	L-5.5	23	11	22.5	6	RPL08.1010/100/RF
		100/150	60	21	L-5.5	23	11	22.5	6	RPL08.1010/150/RF
	G 1/4	38,5/50	26.5	21	L-7.5	23	14	22.5	8	RPL08.1011/50/RF
		55/100	60	21	L-7.5	23	14	22.5	8	RPL08.1011/100/RF
		105/150	60	21	L-7.5	23	14	22.5	8	RPL08.1011/150/RF
		155/200	60	21	L-7.5	23	14	22.5	8	RPL08.1011/200/RF

\* With blue ring add **/KB** to the part number, with red ring add **/KR** to the part number

## Installation of the sockets in the mould



# Additional equipment

## Replacement Nitrile seal for plug



Available in packs of 10.

Model	Part numbers
RPL 06	R603 507 11
RPL 08	R600 007 11
RPL 12	R600 011 10

## Protective dust cap for socket



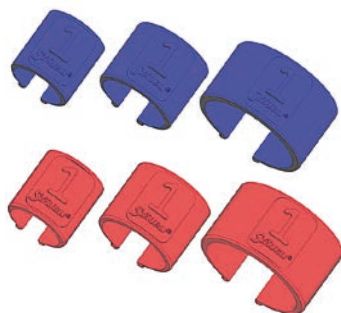
Ensure cleanliness of your circuit.  
Available in box of 100 plugs.  
Construction: yellow polyethylene  
Part number: **RPL08.8500/100**

## Temperature control hoses



Information about our range of dedicated hoses can be found in document RN210.

## Colour identification collar for hose



Available in packs of 25 red or blue collars.

### To construct your part numbers:

R 213 8	Ø collar	collar colour	collar number
Common section R 213 8	13 Hose outside Ø13 to 17 mm	Blue collar 7	from 0 to 9
	17 Hose outside Ø17 to 24 mm	Red collar 3	
	24 Hose outside Ø24 to 28 mm		

E.g.: R 213 8 13 7 0 → R 213 813 70 (Blue collar Ø13 engraved 0)

R 213 8 24 3 5 → R 213 824 35 (Red collar Ø24 engraved 5)



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# Global presence of the Stäubli Group

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