

FAST MOVING TECHNOLOGY

*STÄUBLI*

# RBL quick-release coupling

**All fluids | Stainless steel high pressure**



# Modular solution for high-pressure liquids and gases

## Applications

- Hydrogen circuits
- Circuits containing aggressive fluids in a corrosive environment
- Cleaning in the agri-food sector
- Process industry
- Laboratories
- Gas filling of cylinder racks



**Guarantee operator and installation safety**



**Simplify connection operations**



**Improve your productivity**



**Optimise your costs**

## Stäubli's design enhances your performance

### Quality and robust materials

Predominantly stainless steel type 316 L

- High corrosion and pressure resistance
- Proven technology with over 50 years of industrial fluid connections



### Ergonomic design

Connection and disconnection with:

- One-hand connection
- Compact and lightweight design for easy handling
- Optional raised push button for use with gloves
- Disconnection by simply pressing the button



### Adaptability to specific needs

- Wide compatibility with liquids and gases, due to a wide variety of seals
- Diameters: 03, 06, 08, 11, 15, and 19 mm
- A wide variety of end-connections
- Prevention of circuit mixing risks through mechanical coding, thanks to safety key systems



Upon request, we can supply the material certificates according to NF EN 10204 3.1.



The opportunity to spend less and contribute to a sustainable development program.

With Stäubli, you can rely on the performance of your equipment and reliability of long-term investments

## Technical characteristics



	RBL 03	RBL 06	RBL 08	RBL 11	RBL 15	RBL 19
Nominal diameter DN (mm)	3	5.5	8	11	15	19
Maximum allowable pressure PS (bar)*	400	450	400	350	350	300
Cross section (mm <sup>2</sup> )**	7.1	23.8	50.3	95.0	182.0	259.0

\* For hazardous gases as defined in the Directive 2014/68/UE, please ask us for the maximum operating pressure.

\*\* Valid for standard products (ON).

Hydraulic flow rate in l/min at a velocity of 5 m/s:

	RBL 03	RBL 06	RBL 08	RBL 11	RBL 15	RBL 19
Single shut-off	2.1	7.2	15.1	28.5	54.4	85
Double shut-off	1.5	5	12.2	24.5	41	76
No shut-off	2.1	7.2	15.1	28.5	56.5	85

See the charts on page 5.

### Oxygen applications

#### Suggested options for your circuit applications:

- **Industrial oxygen** requiring pressure **below 50 bar**: code **JV/OX**
- **Breathable oxygen** requiring pressure **below 50 bar**: code **JE/OX**
- **Oxygen** requiring pressure **above 50 bar**: we recommend our **ROX 05** sockets, specifically designed to withstand autoignition (adiabatic compression).

See page 6 to find out how to create your part number.



### Material

Mainly stainless steel type 316 L.

Springs: stainless steel with 18% chrome.

For more information, please contact us.

### Vacuum tightness

1.10<sup>-3</sup> N.cm<sup>3</sup> / s. in connected and disconnected position (code W).

**For even more stringent requirements, please ask us.**

### Tightness


The choice of material for the seals depends on the fluid being carried and the operating temperature (chemical composition, pressure, temperature). For operation outside the indicated temperature ranges, do not hesitate to call on our technician for advice. We put all our expertise in quick connections at your disposal.

Material	Code	Minimum and maximum allowable temperatures TS (°C)	Applications
<b>Nitrile</b> (NBR)	<b>standard</b>	-15 to +100	<ul style="list-style-type: none"> <li>• Current applications</li> <li>• High mechanical strength</li> </ul>
<b>Fluorocarbon</b> (FPM)	<b>JV</b>	-10 to +200	<ul style="list-style-type: none"> <li>• Good chemical resistance</li> <li>• Outstanding resistance to high temperatures up to 200 °C</li> <li>• Resistance to mineral oils, synthetic hydraulic oils, fuels, chemical products, hydrocarbons and coolants</li> </ul>
<b>Ethylene - Propylene</b> (EPDM)	<b>JE</b>	-20 to +150	<ul style="list-style-type: none"> <li>• Excellent temperature characteristics</li> <li>• Compatible with phosphate-based brake fluids - esters, hot and cold water, steam</li> </ul>
<b>Perfluoro-elastomer</b> (FFKM)	<b>JK</b>	0 to +250	<ul style="list-style-type: none"> <li>• Remarkable resistance to heat and most chemical agents including inorganic and organic acids</li> <li>• Coolants</li> </ul>
<b>Fluorosilicone</b> (FMQ)	<b>JS3</b>	-45 to +175	<ul style="list-style-type: none"> <li>• Maximum working pressure: 50 bar</li> <li>• Good resistance to low and high temperatures</li> <li>• Resistance to mineral oils, fuels</li> </ul>

### KES sealing kit

KES sealing kits consist of a retaining ring and an O-ring to create a perfect seal between the socket and the plug with its base.



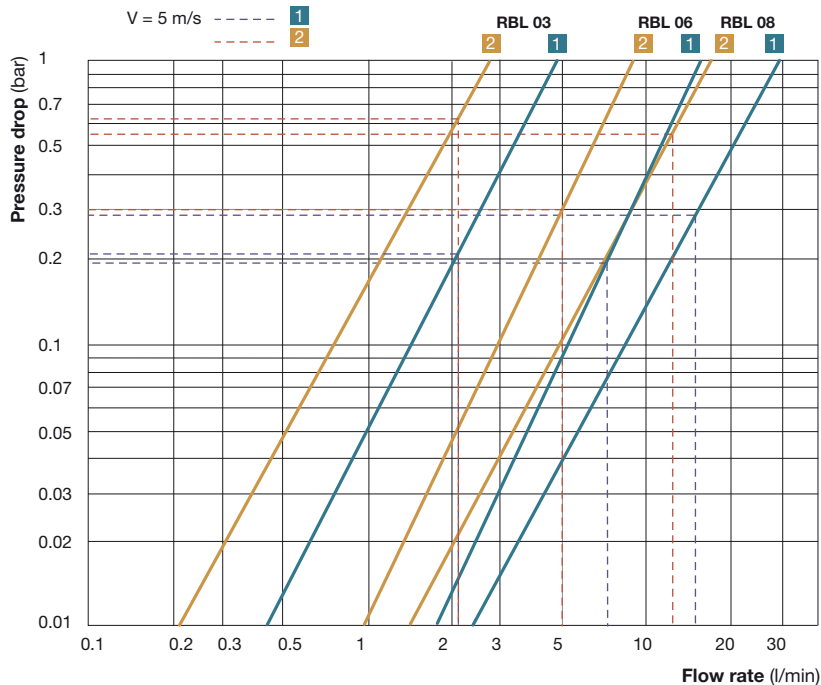
Part references that are compatible with this option are indicated with the symbol  in the part-number tables on pages 9 to 14.

**KES sealing kits must be ordered separately.**

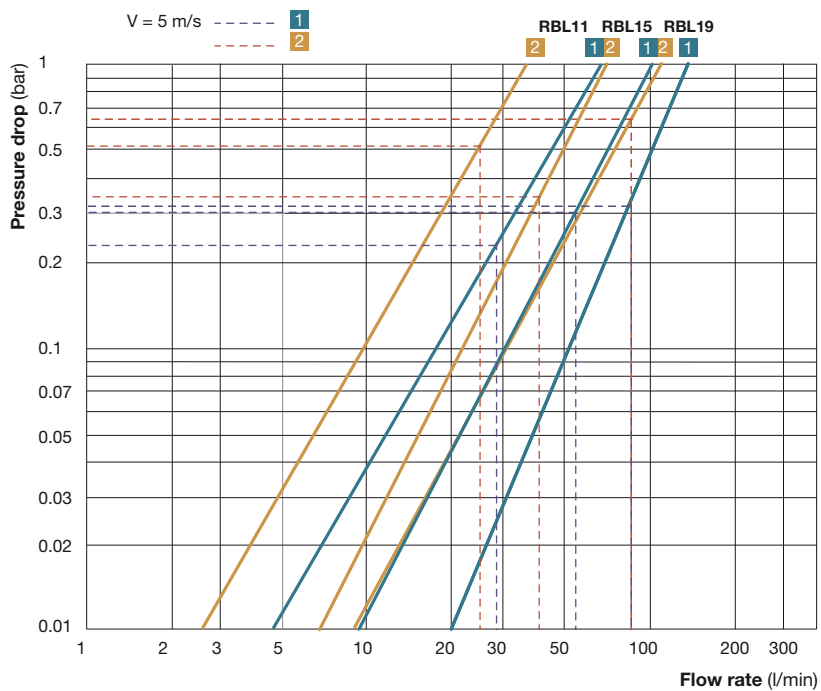
Select the ring and seal materials depending on your application, using our new documentation KES RP003.

## Flow rate / pressure drop hydraulic charts

### RBL 03 - RBL 06 - RBL 08



### RBL 11 - RBL 15 - RBL 19



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

**RBL 03**

1 Cv = 0.34  
 2 Cv = 0.19

**RBL 06**

1 Cv = 1.08  
 2 Cv = 0.62

**RBL 08**

1 Cv = 2.06  
 2 Cv = 1.16

**RBL 11**

1 Cv = 4.69  
 2 Cv = 2.51

**RBL 15**

1 Cv = 7.05  
 2 Cv = 4.91

**RBL 19**






1 Cv = 9.42  
 2 Cv = 7.58

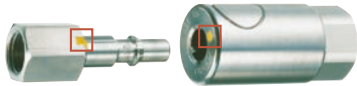
## 7 safety keys\*

These prohibit any connection errors between different gases or liquids and allow for systematic identification of circuits.

- **Visual identification**

By color marking placed on the plug and the socket.

	Yellow	180°		<b>Code 0</b>
	Purple	165°		<b>Code 15</b>
	Red	150°		<b>Code 3</b>
	Green	135°		<b>Code 45</b>
	Blue	120°		<b>Code 6</b>
	Brown	105°		<b>Code 75</b>
	Black	90°		<b>Code 9</b>



\* Safety keys not available for all diameters: please consult us

- **Mechanical interlock**

2 milled grooves on the male end (key) correspond to 2 pins on the socket (lock).

- **Safety keys also available on recessed couplings**

by color marking placed on the plug and the socket.



Standard stainless steel 316L disk in gray, but there is an option to order a disk that corresponds to the key only, by specifying the color code in the product reference (see below).

## Colored trim disks for recessed couplings

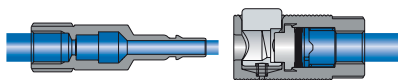
For immediate visual identification of circuits, opt for an anodized Aluminum disk.

	Yellow	<b>code DKJ</b>
	Purple	<b>code DKW</b>
	Red	<b>code DKR</b>
	Green	<b>code DKV</b>
	Blue	<b>code DKB</b>
	Brown	<b>code DKM</b>
	Black	<b>code DKN</b>



## Shut-off

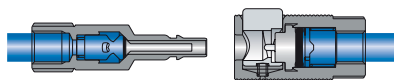
- **Single shut-off**



Socket with automatic closing.  
Full flow plug.

Socket: **standard**  
Plug: **full flow**

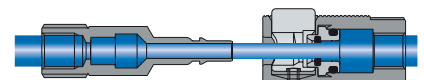
- **Double shut-off**



Socket and plug with automatic closing.

Socket: **code OD**  
Plug: **shut-off valve**

- **No shut-off**



Full flow socket and plug.

Socket: **code OS**  
Plug: **full flow**

## Options

- **Protective caps** to be ordered separately (provided in chloroprene version in the case of an order for an auto shut-off plug)

Stainless steel  
cap for socket:  
**RBE xx.8500/IC**



Stainless steel  
cap for plug:  
**RBE xx.8550/IC**



Chloroprene  
cap for plug:  
**RBE xx.8550/BC**



Replace xx with the passage diameter corresponding to the socket or the plug. For example: RBE 03.8550 = cap for a plug with a 3 mm passage diameter.

- **Raised push button**



Recommended for frequent disconnections, or working with protective gloves

**Code VD**

- **Attachment for protective cap on socket**



Protective cap to be ordered separately

**Code FB**

See above.

- **Other options are also possible** (please consult us):

**OX:** preparation of the product for use with oxygen\*

**FDA:** preparation of the product to meet FDA requirements\*\*

**USP:** preparation of the product to meet USP requirements\*\*

**TSE:** preparation of the product to meet TSE requirements\*\*

**UC:** preparation of the product to meet PMUC requirements\*\*\*

\* OX is available with JV and JE seals

\*\* FDA, USP, and TSE are available with the JE seal

\*\*\* UC is available with the JE seal

# How to create your part number for...

## • Socket

**Standard socket**  
(pages 9 to 14)



**RBL03.1100/IC / JE / OD / VD/FB / 9**

**Tightness** (page 4)

JV • JV/OX • JE • JE/OX • JK • JS3 • JE/FDA • JE/USP

**Shut-off** (page 6)

OS • OD

**Options** (page 7)

**Push-button lock:** VD • **Cap fixing:** FB

**Safety keys** (page 6)

0 • 3 • 6 • 9 • 15 • 45 • 75

## • Plug

**Standard plug**  
(pages 9 to 14)

- Full flow:



**RBL03.6100/IC / 9**

- Self shut-off:



**RBL03.7100/IC / JS3 / 9**

**Tightness** (page 4)

JV • JV/OX • JE • JE/OX • JK • JS3 • JE/FDA • JE/USP

**Safety keys** (page 6)

0 • 3 • 6 • 9 • 15 • 45 • 75










## Part numbers

### RBL 03









#### Sockets

#### Recessed sockets

Female thread	Part numbers	Fittings	Part numbers
	 RBL03.1100/IC	G 1/8	RBL03.2100/IC 
	RBL03.1200/IC	NPT 1/8	RBL03.2200/IC
	RBL03.1201/IC	NPT 1/4	-
<b>Male thread 60° sealing cone &amp; NPT version</b>			
	 RBL03.1150/IC	G 1/8	RBL03.2150/IC 
	RBL03.1151/IC	G 1/4	RBL03.2151/IC
	RBL03.1250/IC	NPT 1/8	RBL03.2250/IC
	RBL03.1251/IC	NPT 1/4	RBL03.2251/IC
<b>For calibrated stainless steel pipe**</b>			
	RBL03.1766/IC	Ø 6 mm ext.	RBL03.2766/IC
	RBL03.1753/IC	Ø 1/4" ext.	RBL03.2753/IC

#### Full flow plugs

#### Auto shut-off plugs

Female thread	Part numbers	Fittings	Part numbers
	 RBL03.6100/IC	G 1/8	RBL03.7100/IC 
	RBL03.6200/IC	NPT 1/8	RBL03.7200/IC
	RBL03.6201/IC	NPT 1/4	RBL03.7201/IC
	-	UN 7/16*	RBL03.7311/IC
<b>Male thread 60° sealing cone &amp; NPT version</b>			
	 RBL03.6150/IC	G 1/8	RBL03.7150/IC 
	 RBL03.6151/IC	G 1/4	RBL03.7151/IC
	RBL03.6250/IC	NPT 1/8	RBL03.7250/IC
	RBL03.6251/IC	NPT 1/4	RBL03.7251/IC
<b>For calibrated stainless steel pipe**</b>			
	RBL03.6766/IC	Ø 6 mm ext.	RBL03.7766/IC
	RBL03.6753/IC	Ø 1/4" ext.	RBL03.7753/IC

Other fittings are available. For further information, please contact your Stäubli sales contact / our authorized Stäubli representative.






\*\* Characteristics of stainless steel pipes: compliant with ISO 1127 class D4 and ASTM A 269 class 1 (installation instructions RV1300100).

# Part numbers

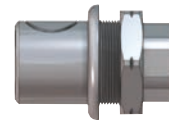
## RBL 06

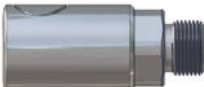






### Sockets

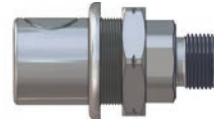
### Recessed sockets


Female thread	Part numbers	Fittings	Part numbers
	 RBL06.1101/IC	G 1/4	RBL06.2101/IC 
	 RBL06.1102/IC	G 3/8	RBL06.2102/IC 
	RBL06.1201/IC	NPT 1/4	RBL06.2201/IC
	RBL06.1202/IC	NPT 3/8	RBL06.2202/IC
	RBL06.1314/IC	UN 9/16*	RBL06.2314/IC

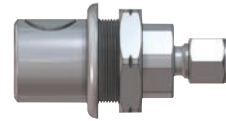
\* to norm SAE J1926/1



Male thread 60° sealing cone & NPT version			
	 RBL06.1150/IC	G 1/8	RBL06.2150/IC 
	 RBL06.1151/IC	G 1/4	RBL06.2151/IC 
	 RBL06.1152/IC	G 3/8	RBL06.2152/IC 
	RBL06.1251/IC	NPT 1/4	RBL06.2251/IC
	RBL06.1252/IC	NPT 3/8	RBL06.2252/IC





For calibrated stainless steel pipe**			
	RBL06.1766/IC	Ø 6 mm ext.	RBL06.2766/IC
	RBL06.1753/IC	Ø 1/4" ext.	RBL06.2753/IC
	RBL06.1755/IC	Ø 3/8" ext.	RBL06.2755/IC
	RBL06.1756/IC	Ø 1/2" ext.	-









### Full flow plugs


### Auto shut-off plugs

Female thread	Part numbers	Fittings	Part numbers
	RBL06.6101/IC	G 1/4	RBL06.7101/IC
	 RBL06.6102/IC	G 3/8	RBL06.7102/IC
	RBL06.6201/IC	NPT 1/4	RBL06.7201/IC
	RBL06.6202/IC	NPT 3/8	RBL06.7202/IC



Male thread 60° sealing cone & NPT version			
	 RBL06.6150/IC	G 1/8	RBL06.7150/IC 
	 RBL06.6151/IC	G 1/4	RBL06.7151/IC 
	RBL06.6152/IC	G 3/8	RBL06.7152/IC 
	RBL06.6251/IC	NPT 1/4	RBL06.7251/IC
	RBL06.6252/IC	NPT 3/8	RBL06.7252/IC



For calibrated stainless steel pipe**			
	RBL06.6766/IC	Ø 6 mm ext.	RBL06.7766/IC
	RBL06.6753/IC	Ø 1/4" ext.	RBL06.7753/IC
	RBL06.6755/IC	Ø 3/8" ext	RBL06.7755/IC



Other fittings are available. For further information, please contact your Stäubli sales contact / our authorized Stäubli representative.












\*\* Characteristics of stainless steel pipes: compliant with ISO 1127 class D4 and ASTM A 269 class 1 (installation instructions RV1300100).

## Part numbers

### RBL 08







#### Sockets

#### Recessed sockets

Female thread	Part numbers	Fittings	Part numbers
	 RBL08.1102/IC	G 3/8	RBL08.2102/IC 
	 RBL08.1103/IC	G 1/2	RBL08.2103/IC 
	RBL08.1202/IC	NPT 3/8	RBL08.2202/IC
	RBL08.1203/IC	NPT 1/2	RBL08.2203/IC
<b>Male thread 60° sealing cone &amp; NPT version</b>			
	 RBL08.1152/IC	G 3/8	RBL08.2152/IC 
	 RBL08.1153/IC	G 1/2	RBL08.2153/IC 
	RBL08.1252/IC	NPT 3/8	RBL08.2252/IC
	RBL08.1253/IC	NPT 1/2	RBL08.2253/IC
<b>For calibrated stainless steel pipe**</b>			
	RBL08.1772/IC	Ø 12 mm ext.	RBL08.2772/IC
	RBL08.1755/IC	Ø 3/8" ext.	RBL08.2755/IC
	RBL08.1756/IC	Ø 1/2" ext.	RBL08.2756/IC

#### Full flow plugs

#### Auto shut-off plugs

Female thread	Part numbers	Fittings	Part numbers
	 RBL08.6102/IC	G 3/8	RBL08.7102/IC 
	RBL08.6103/IC	G 1/2	RBL08.7103/IC
	RBL08.6202/IC	NPT 3/8	RBL08.7202/IC
	RBL08.6203/IC	NPT 1/2	RBL08.7203/IC
<b>Male thread 60° sealing cone &amp; NPT version</b>			
	RBL08.6152/IC	G 3/8	RBL08.7152/IC 
	RBL08.6153/IC	G 1/2	RBL08.7153/IC
	-	NPT 3/8	RBL08.7252/IC
	RBL08.6253/IC	NPT 1/2	RBL08.7253/IC
<b>For calibrated stainless steel pipe**</b>			
	RBL08.6772/IC	Ø 12 mm ext.	RBL08.7772/IC
	RBL08.6755/IC	Ø 3/8" ext.	RBL08.7755/IC
	RBL08.6756/IC	Ø 1/2" ext.	RBL08.7756/IC

Other fittings are available. For further information, please contact your Stäubli sales contact / our authorized Stäubli representative.











\*\* Characteristics of stainless steel pipes: compliant with ISO 1127 class D4 and ASTM A 269 class 1 (installation instructions RV1300100).

# Part numbers

## RBL 11

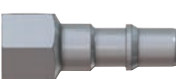








### Sockets

### Recessed sockets

Female thread	Part numbers	Fittings	Part numbers
	 RBL11.1103/IC	G 1/2	RBL11.2103/IC 
	 RBL11.1104/IC	G 3/4	RBL11.2104/IC 
	RBL11.1203/IC	NPT 1/2	RBL11.2203/IC
	RBL11.1204/IC	NPT 3/4	RBL11.2204/IC
	 RBL11.1153/IC	G 1/2	RBL11.2153/IC 
	 RBL11.1154/IC	G 3/4	RBL11.2154/IC 
	RBL11.1253/IC	NPT 1/2	RBL11.2253/IC
	RBL11.1254/IC	NPT 3/4	RBL11.2254/IC

### Full flow plugs

### Auto shut-off plugs

Female thread	Part numbers	Fittings	Part numbers
	 RBL11.6103/IC	G 1/2	RBL11.7103/IC 
	 RBL11.6104/IC	G 3/4	RBL11.7104/IC 
	RBL11.6203/IC	NPT 1/2	RBL11.7203/IC
	RBL11.6204/IC	NPT 3/4	RBL11.7204/IC
	RBL11.6153/IC	G 1/2	RBL11.7153/IC 
	 RBL11.6154/IC	G 3/4	RBL11.7154/IC 
	-	NPT 1/2	RBL11.7253/IC
	RBL11.6254/IC	NPT 3/4	-




Other fittings are available. For further information, please contact your Stäubli sales contact / our authorized Stäubli representative.




## Part numbers

### RBL 15

#### Sockets

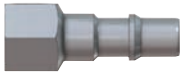


#### Recessed sockets




Female thread	Part numbers	Fittings	Part numbers
	 RBL15.1104/IC	G 3/4	RBL15.2104/IC 
	RBL15.1204/IC	NPT 3/4	RBL15.2204/IC

Male thread 60° sealing cone & NPT version	Part numbers	Fittings	Part numbers
	 RBL15.1154/IC	G 3/4	RBL15.2154/IC 
	RBL15.1254/IC	NPT 3/4	RBL15.2254/IC

#### Full flow plugs

#### Auto shut-off plugs

Female thread	Part numbers	Fittings	Part numbers
	 RBL15.6104/IC	G 3/4	RBL15.7104/IC 
	RBL15.6204/IC	NPT 3/4	RBL15.7204/IC

Male thread 60° sealing cone & NPT version	Part numbers	Fittings	Part numbers
	 RBL15.6154/IC	G 3/4	RBL15.7154/IC 
	RBL15.6254/IC	NPT 3/4	RBL15.7254/IC






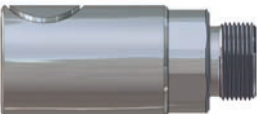




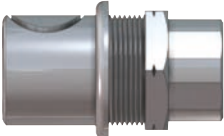
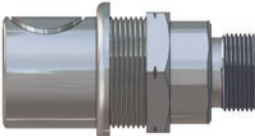
Other fittings are available. For further information, please contact your Stäubli sales contact / our authorized Stäubli representative.

# Part numbers

## RBL 19










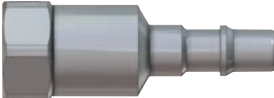

### Sockets

### Recessed sockets

Female thread	Part numbers	Fittings	Part numbers
	 RBL19.1104/IC	G 3/4	RBL19.2104/IC 
	 RBL19.1105/IC	G 1	RBL19.2105/IC 
	RBL19.1204/IC	NPT 3/4	RBL19.2204/IC
	RBL19.1205/IC	NPT 1	RBL19.2205/IC
	RBL19.1114/IC	Rc 3/4	RBL19.2114/IC
<b>Male thread 60° sealing cone &amp; NPT version</b>			
	 RBL19.1154/IC	G 3/4	RBL19.2154/IC 
	 RBL19.1155/IC	G 1	RBL19.2155/IC 
	RBL19.1254/IC	NPT 3/4	RBL19.2254/IC
	RBL19.1255/IC	NPT 1	RBL19.2255/IC
			
			

### Full flow plugs

### Auto shut-off plugs

Female thread	Part numbers	Fittings	Part numbers
	 RBL19.6104/IC	G 3/4	RBL19.7104/IC 
	RBL19.6105/IC	G 1	RBL19.7105/IC 
	RBL19.6204/IC	NPT 3/4	RBL19.7204/IC
	RBL19.6205/IC	NPT 1	RBL19.7205/IC
	-	Rc 3/4	RBL19.7114/IC
<b>Male thread 60° sealing cone &amp; NPT version</b>			
	 RBL19.6154/IC	G 3/4	RBL19.7154/IC 
	 RBL19.6155/IC	G 1	RBL19.7155/IC 
	RBL19.6254/IC	NPT 3/4	RBL19.7254/IC
	RBL19.6255/IC	NPT 1	RBL19.7255/IC
			
			

Other fittings are available. For further information, please contact your Stäubli sales contact / our authorized Stäubli representative.



● Stäubli Units    ○ Representatives/Agents

# Global presence of the Stäubli Group

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