

SBA Hydraulics



SBA anti-pollution hydraulic couplings ...

The anti-pollution generation

A design that eliminates residual dead internal volume:

- prevents a specific volume of oil being released at every uncoupling operation,
- prevents the introduction of the same specific volume of air at every coupling operation.

Automatic operation

Coupling and uncoupling in one movement, one-handed.

Reduced pressure drop

The circuit is specifically designed to allow direct flow of the fluid stream without breaking the stream and without any turbulence. The resulting pressure drops are very small.

Instant visual circuit identification.

Fast circuit identification by coloured rings:

- colourless
- blue
- red

Robust, protected locking mechanism

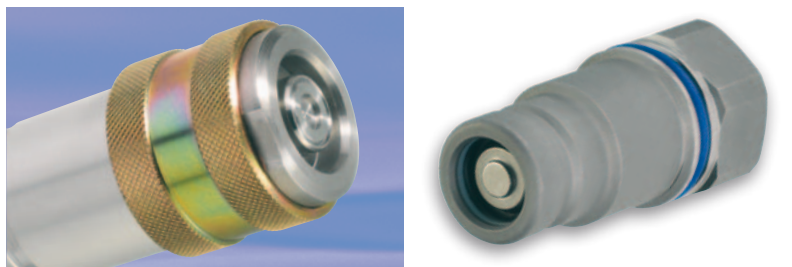
Great number of large cross section balls, that are completely insulated and that cannot clog.

Protected sealing parts

Sealing faces and seals protected from external impacts.

Protective dust caps

Available on all models.



Applications

Hydraulic oil circuits:

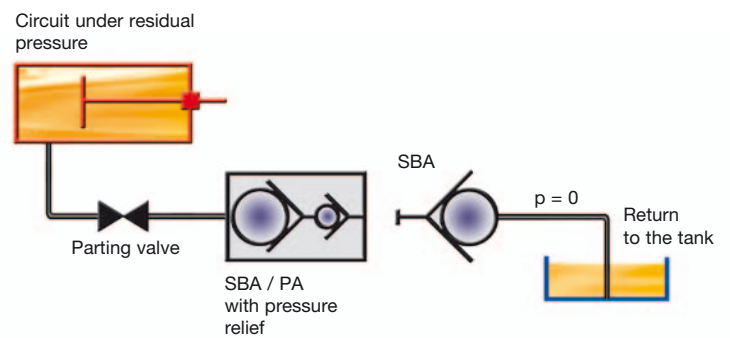
- connection of hydraulic components on static and dynamic test benches
- connections of pumps, cylinders and directional control valves

... high resistance to all pressures

Connection under residual pressure

Lowering of the residual pressure by a central relief valve built into the socket valve or the plug valve.

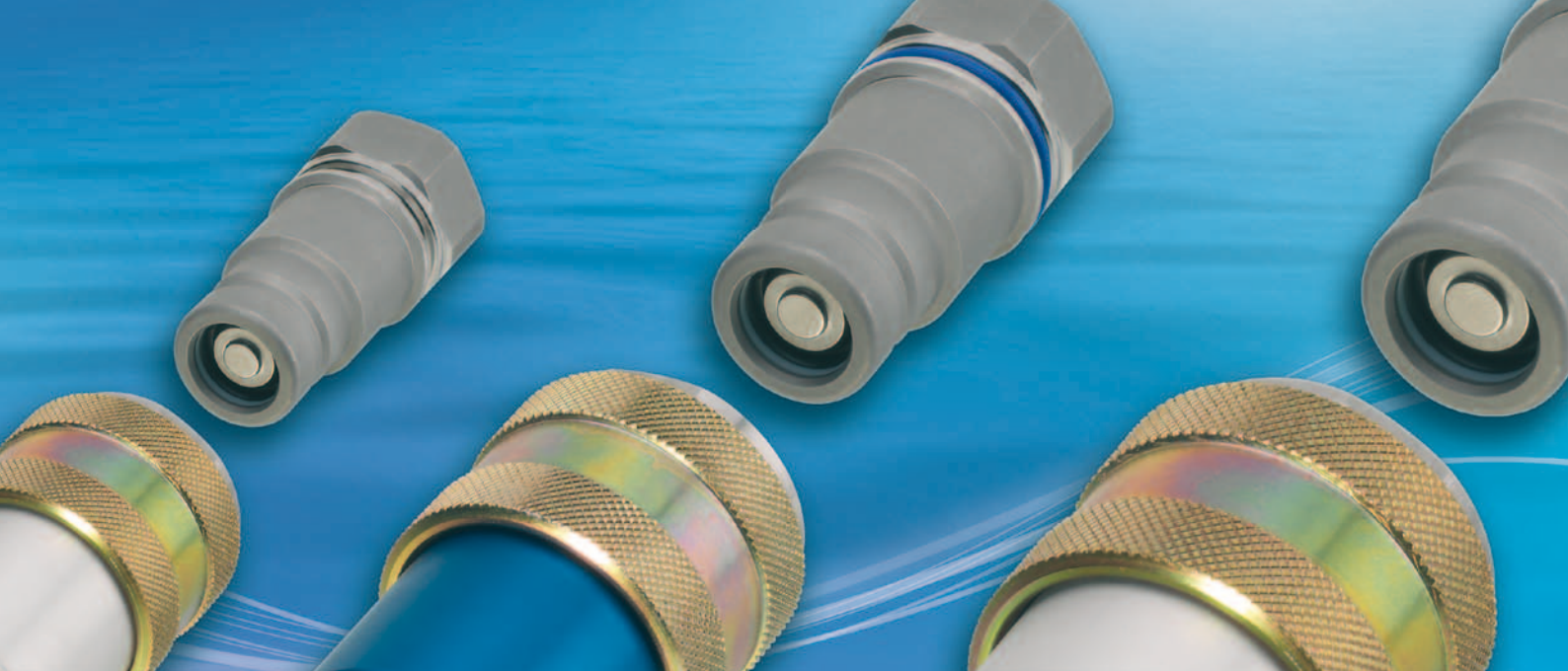
Automatic opening of this valve allows the volume of oil necessary for the backward movement of the valve to be released into the hose that is not under pressure.



Applications

All hydraulic circuits needing to be connected under residual pressure:

- hydraulic core circuits on injection press moulds
- hydraulic circuits on rolling mill trains



Technical data

	SBA 08	SBA 11	SBA 12	SBA 15
Max. working pressure (bar)	450	350	350	350
Flow path (mm)	08	11	12	15
Shut-off double				

Leaktightness

- Nitrile (NBR) seals
- Fluorcarbon (FPM) seals

Working temperatures

- **without dustcap**
 - Nitrile (NBR) seals - 15 °C to + 100 °C
 - Fluorcarbon (FPM) seals - 10 °C to + 150 °C
- **with dustcap**
from - 15 °C to + 80 °C

Construction

- main parts made from chrome steel and carbon steel
- corrosion protection
- polyethylene or polyvinyl acetal protective dust caps

Protective dust caps

Sockets: transparent polyethylene, supplied with a 15 cm chain and fixing ring

Plugs:

- **SBA 08** : polyvinyl acetal, supplied with a 15 cm chain and a fixing ring
- **SBA 12** : polyethylene, supplied with a 15 cm chain and a fixing ring

Connection under residual pressure

		SBA 08/PA	SBA 12/PA
Max. working pressure (bar)	Connected	450	350
	Disconnected	160	160
Max. residual pressure for coupling under pressure (bar)	Socket	40	40
	Plug	120	120

Flow rate / pressure drop charts

Zone A : all seals

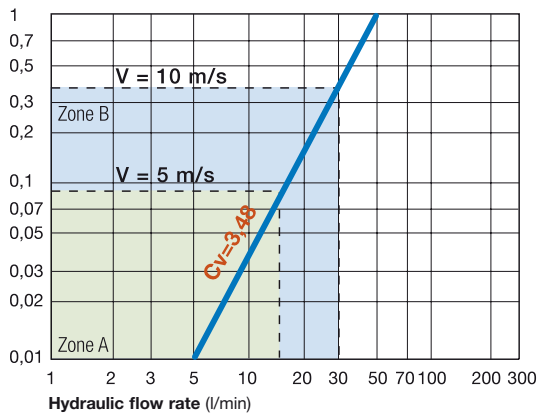
Zone B : all seals

Temperature $\leq 60\text{ }^{\circ}\text{C}$

Speed (m/s)	Flow rate (l/mn)			
	SBA 08	SBA 11	SBA 12	SBA 15
5	15	28,5	34	53
10	32	57	68	106

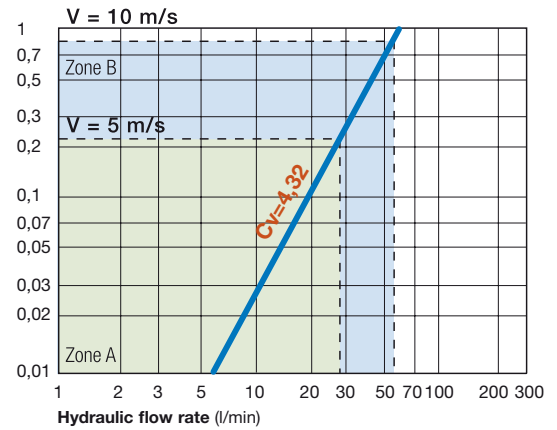
SBA 08

Pressure drop (bar)



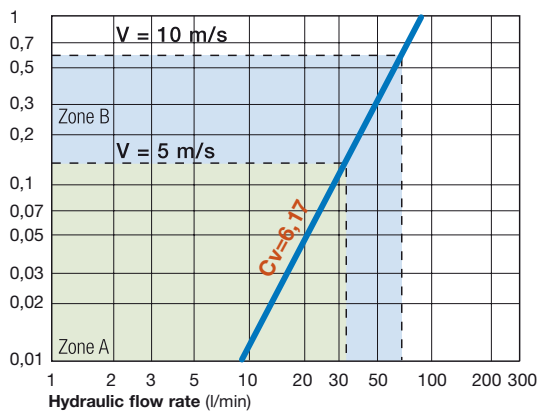
SBA 11

Pressure drop (bar)



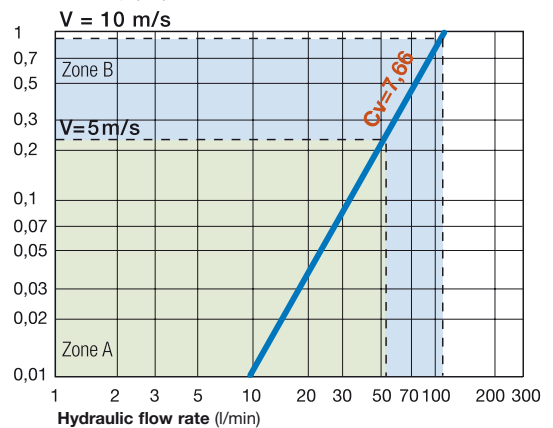
SBA 12

Pressure drop (bar)



SBA 15

Pressure drop (bar)

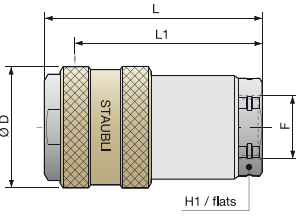
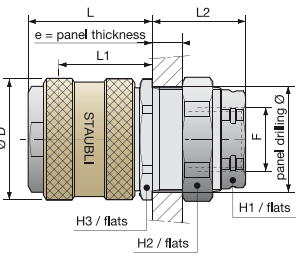
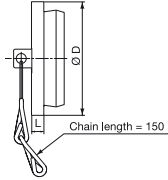


Test conditions:

- Test fluid: water
- Direction of flow: plug → socket

Part-numbers

Sockets

Designation	Model	End connection	Dimensions (mm)									Part-numbers
			Ø D	L	L1	L2	H1/flats	Ø	e max.	H2/flats	H3/flats	
1. Socket female thread 	SBA 08	G 1/2	40	72	62		30					SBA 08.1103
	SBA 11	G 1/2	40	72	62		30					SBA 11.1103
	SBA 12	G 3/4	50	89	74,5		41					SBA 12.1104
	SBA 15	G 3/4	50	89	74,5		41					SBA 15.1104
2. Panel mounted socket female thread 	SBA 08	G 1/2	40	41	31	31	30	35	13	38	36	SBA 08.2103
	SBA 11	G 1/2	40	41	31	31	30	35	13	38	36	SBA 11.2103
	SBA 12	G 3/4	50	47	32,5	42	41	49	25	54		SBA 12.2104
	SBA 15	G 3/4	50	47	32,5	42	41	49	25	54		SBA 15.2104
3. Protective dust cap 	SBA 08 and SBA 11		28	3								SBA 08.8500
	SBA 12 and SBA 15		36	2,5								SBA 12.8500

Compatibility between diameters

SBA 08 or 11 socket → SBA 08 plug
 SBA 12 or 15 socket → SBA 12 plug

Connection under residual pressure

Option available on SBA 08 and 12 only:

Situation 1: socket under residual pressure

Return to tank on the plug side

SBA 08 / PA socket → SBA 08 plug
 SBA 12 / PA socket → SBA 12 plug

- socket: add the code "PA" to the above part-numbers
 - plug: part-numbers on page 7
 Ex. : SBA 08.1103/PA + SBA 08.7103

Situation 2: plug under residual pressure

Return to the tank on the socket side

SBA 08 / PA plug → SBA 08 or 11 socket
 SBA 12 / PA plug → SBA 12 or 15 socket

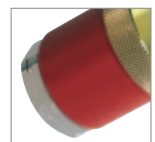
- socket: part-numbers above
 - plug: add the code "PA" to the part-numbers on page 7
 Ex. : SBA 08.1103 + SBA 08.7103/PA

Tightness

The Fluorocarbon seal option is available on all models.

Add the code "JV" to the socket and plug part-numbers. Ex. : SBA 08.1103/JV

Identification of the circuits

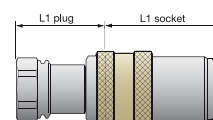


The coloured ring option is available all on diameters:

Add the colour code to the socket and plug part-numbers:

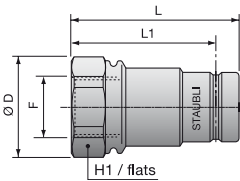
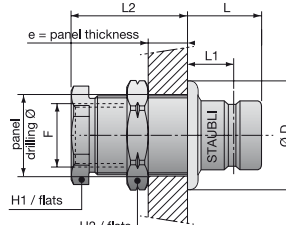
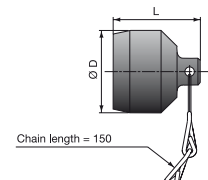
KB = blue rings **KR** = red rings
 Ex. : SBA 08.1103/KR - SBA 08.7103/KR

Length of connected socket and plug

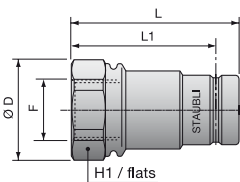
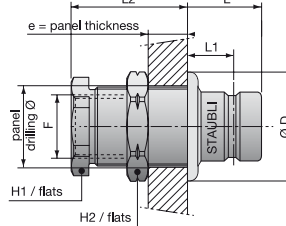
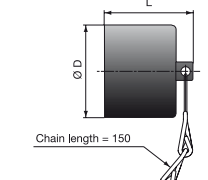


Add L1 of the socket to L1 of the corresponding plug.

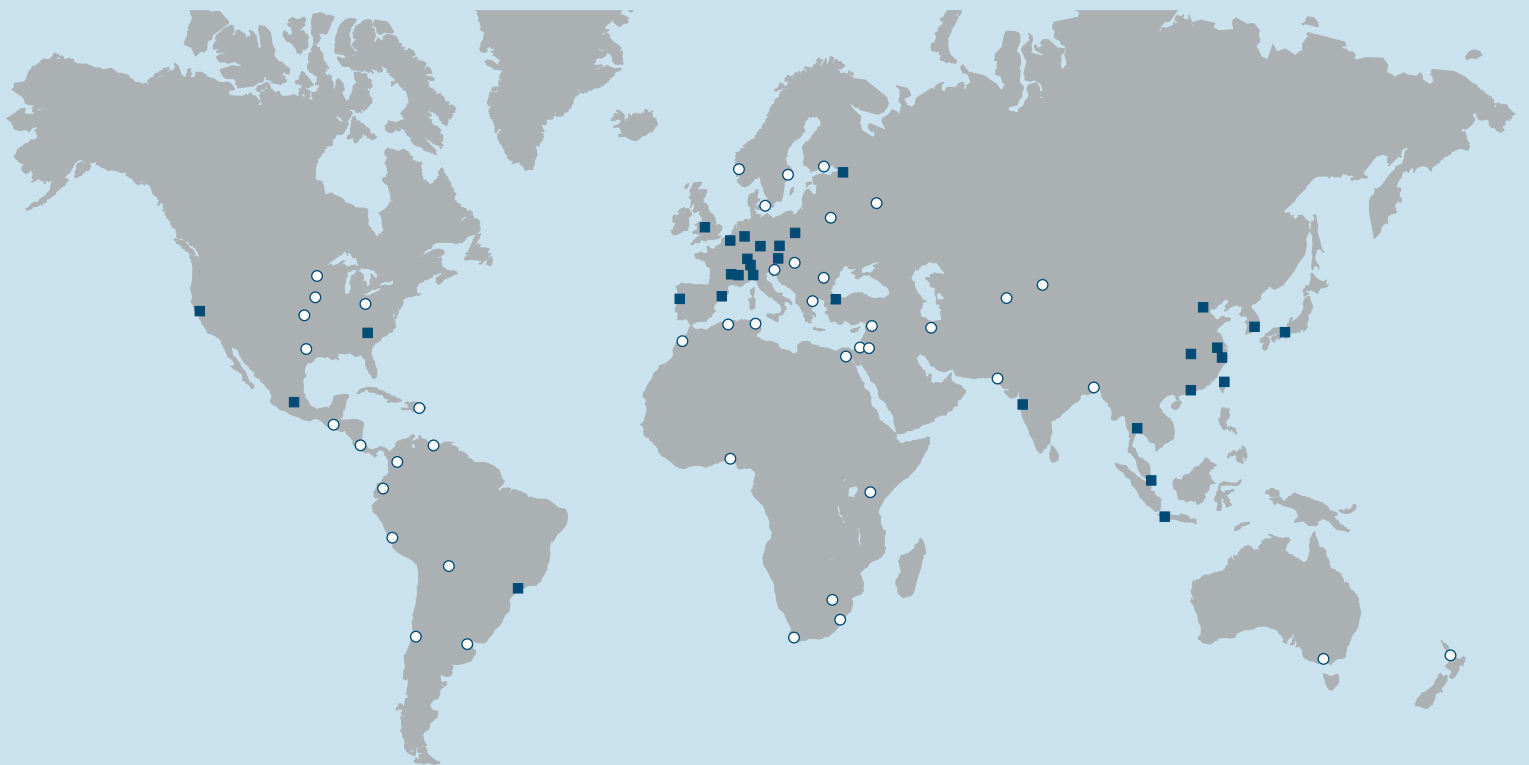
Plugs for SBA 08 and SBA 11 sockets

Designation	Model	End connection	Dimensions (mm)								Part-numbers
			Ø D	L	L1	L2	H1/flats	Ø	e max.	H2/flats	
1. Plug female thread 	SBA 08	G 1/2	32,5	63	54		30				SBA 08.7103
2. Panel mounted plug female thread 	SBA 08	G 1/2	36	24,5 min.	16 min.	38,5 max.	30	27	25,5 max.	32	SBA 08.5103
3. Protective dust cap 	SBA 08		33,5	33,5							SBA 08.8550

Plugs for SBA 12 and SBA 15 sockets

Designation	Modell	End connection	Dimensions (mm)								Part-numbers
			Ø D	L	L1	L2	H1/flats	Ø	e max.	H2/flats	
1. Plug female thread 	SBA 12	G 3/4	44,5	74	65		41				SBA 12.7104
2. Panel mounted plug female thread 	SBA 12	G 3/4	41	30 min.	21 min.	44 max.	41	35	25 max.	38	SBA 12.5104
3. Protective dust cap 	SBA 12		34	31							SBA 12.8550

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



Global presence of the Stäubli Group

- Stäubli units
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International sales coordination

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