FAST MOVING TECHNOLOGY



# SPC multi-couplings

### **Sequential injection**



# Centralised connections to improve injection control



#### All the cleverness of a range specifically designed for sequential injection, with a very short response time for hydraulic control circuits

for easier and optimised control of opening and closing of sequential injection nozzles:

- up to 8 l/min flow,
- nozzle opening time 0.15 s\*.

\*(value for information only for a 19.5 cm<sup>3</sup> nozzle)

#### Flush face non spill design

preventing pollution of the work area and the circuits.

New locking system design ergonomic and compact.

### Centralised hydraulic energy connection

- to optimise mould change times
- to rationalise connections

#### Great flexibility in use

with systems that can be used for both existing and new presses and moulds.

### Stäubli



**Registered Community Design** 

#### **Efficient and fast**

Safe and fast connections and disconnections with simple rotation of the control lever.

Durable performance combining optimum flow and excellent pressure resistance in a very small size.

#### **Compact design**

using a 0 interface and unions fitted in pockets to reduce their space requirement to a minimum.

#### **Tough design**

with flush fitted components (plugs, sockets and locking systems), to prevent any risk of damage when handled.

#### Optimum safety provided by:

- connection in only one position, preventing any danger of a mistake by circuit inversion.
- tough ball locking, coupled with a safety locking system with a removable handle,
- the foolproof keying system avoids any cross connection in the event of the use of several plates on the same mould,
- proximity sensors available as an option on both models.

#### Circuit connection on mould side

by rigid tube on the side or directly to the underside of the plate.

#### **Applications**

Centralised supply to hydraulic cylinders controlling the opening and closing needles in sequential injection circuits on hot channels.



The opportunity to spend less and contribute to a sustainable development programme. With Stäubli, you can rely on:

- the performance of your equipment

- reliability of long term investments

- no workplace pollution

## 2 major standards

which can be modulated at will depending on the number of circuits to connect.



**SPC 203** 

#### Passage diameter: 3 mm

• 12 sockets (6 circuits) ..... SPC 203.12 Mould plate available in 3 versions, from 4 plugs (2 circuits) to 12 plugs (6 circuits).



#### **SPC 205**

#### Passage diameter: 5 mm

Available in 2 models:

- 12 sockets (6 circuits) ...... SPC 205.12 Mould plate available in 5 versions, from 4 plugs (2 circuits) to 12 plugs (6 circuits)
- 16 sockets (8 circuits) ...... SPC 205.16 Mould plate available in 2 versions, 14 plugs (7 circuits) and 16 plugs (8 circuits)









#### **VERY COMPREHENSIVE AND MODULAR RANGE**

### ptions

Integrated into the product upon order: see corresponding codes on pages 8 to 13. All options can be used together.



Safety locking

#### **VS** option

This safety feature, automatically triggered during connection, prevents any plates from accidental disconnection, even if the control lever is knocked. To disconnect, simultaneously pull the safety system button and turn the control lever. Visual check: when the safety device is triggered, the grey marker can no longer be seen.

Marker for the visual check of "locked" and "unlocked" position.





This option makes it possible for moulds with many circuits, to install 2 multicouplings side by side in a small space whilst keeping the same direction of use for the control lever.

Immediate identification of the LH option by a green mark.



The VS and LH options can be combined in a single VS/LH version **VS/LH** option

This version combines locking safety with flexible operation and equipment design.



**Proximity sensors DP** option



Controls "connected" and "disconnected" positions. PNP sensors.

Wire connections using standard M12 electrical connectors make connection to the electrical cabinet easier, enable the quick replacement of the sensor and avoid any wiring errors.



# Additional equipment

to be ordered separately: see part-numbers on page 14.

#### Parking plate

equipped with a locking system for storage of the plate when not in use. Parking plate can be fitted with a proximity sensor (as an option).

#### Foolproof keying system

Enables all connection errors to be avoided when using several plates on the same mould.





### Part-numbers

#### SPC 203.12 - Press equipment

Model	Number of nozzles	Plate fitted with	Socket positioning	End connection	Part-numbers
	6	12 sockets		G 1/8 female	SPC 203.12.1100/JV
	10			6	3
	2		81	ко 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Model	Number of nozzles	Plate fitted with	Socket positioning	End connection	Part-numbers				
	0 10	12 sockets		Rc 1/8 female	SPC 203.12.1110/JV				
	U		12 SOCKETS	12 SOCKETS	12 SUCKEIS	12 SOCKETS	12 SOCKETS	<b>000000</b>	UN 3/8 - 24 female*





\* according to SAE J1926-1

#### **Options**

Add the corresponding option codes to the part-numbers above:

- Safety locking ......
  VS code
- Reversed control lever ..... LH code

•	VS and LH option co	mbination <b>VS</b> /	LH code
•	Proximity sensor		DP code



#### SPC 203.12 - Mould equipment

Model	Number of nozzles	Plate fitted with	Plug positioning	End connection	Part-numbers
A ALL	2	4 plugs		G 1/8 female	SPC 203.04.7100/JV
····	4	8 plugs		G 1/8 female	SPC 203.08.7100/JV
	6	12 plugs		G 1/8 female	SPC 203.12.7100/JV
	110	97	61 01 01 01 01 01 01 01 01 01 01 01 01 01	90° fitt 90° fitt Saps Fitting from the u	ing Inderside of the plate *

Model	Number of nozzles	Plate fitted with	Plug positioning	End connection	Part-numbers	
	0	1 pluge		Rc 1/8 female	SPC 203.04.7110/JV	
C. C. La	2	4 plugs		UN 3/8 - 24 female**	SPC 203.04.7309/JV	
The part of the pa	Λ	8 plugs		Rc 1/8 female	SPC 203.08.7110/JV	
·	-	o piugs		UN 3/8 - 24 female**	SPC 203.08.7309/JV	
	6	12 pluge		Rc 1/8 female	SPC 203.12.7110/JV	
	0	12 plogo	12 plage		UN 3/8 - 24 female**	SPC 203.12.7309/JV
	110	15 97		90° fit 90° fit Caps Fitting from the	ting underside of the plate *	

\* In case of fitting from the underside of the plate, the caps must be placed on the lateral tappings.

\*\* according to SAE J1926-1

#### Additional equipment

• Parking plate and foolproof keying system: see part-numbers page 14.

Options and additional equipment shown on pages 6 and 7.

### Part-numbers

#### SPC 205.12 - Press equipment



Model	Number of nozzles	Plate fitted with	Socket positioning	End connection	Part-numbers
	4	8 cockets		Rc 1/4 female	SPC 205.08.1111/JV
FFFFFFFFFFFFFFFF	4	o sockets	00000	UN 9/16 - 18 female*	SPC 205.08.1314/JV
	5			Rc 1/4 female	SPC 205.10.1111/JV
145	5	TU SUCKEIS		UN 9/16 - 18 female*	SPC 205.10.1314/JV
	6	12 sockets		Rc 1/4 female	SPC 205.12.1111/JV
				UN 9/16 - 18 female*	SPC 205.12.1314/JV
	97 - 97	EZ			

#### **Options**

Add the corresponding option codes to the part-numbers above:

- Safety locking ......
  VS code
- Reversed control lever ......

•	VS and LH option combination	VS/LH code
•	Proximity sensor	DP code

\* according to SAE J1926-1



### SPC 205.12 - Mould equipment

Model	Number of nozzles	Plate fitted with	Plug positioning	End connection	Part-numbers
Contraction of the second second	2	4 plugs		G 1/4 female	SPC 205.04.7101/JV
90° fitting	3	6 plugs		G 1/4 female	SPC 205.06.7101/JV
Caps Fitting from the underside of the plate *	4	8 plugs	000000 0100000	G 1/4 female	SPC 205.08.7101/JV
145	5	10 plugs	000000 010000 000000	G 1/4 female	SPC 205.10.7101/JV
	6	12 plugs	000000 0100000000000000000000000000000	G 1/4 female	SPC 205.12.7101/JV
Model	Number of nozzles	Plate fitted with	Plug positioning	End connection	Part-numbers
. Aller	2	4 plugs		Rc 1/4 female	SPC 205.04.7111/JV
HERE &				UN 9/16 - 18 female**	SPC 205.04.7314/JV
- A	0	Caluar		Rc 1/4 female	SPC 205.06.7111/JV
90° fitting	3	6 piugs		UN 9/16 - 18 female**	SPC 205.06.7314/JV
Caps	4			Rc 1/4 female	SPC 205.08.7111/JV
of the plate *	4	8 piugs		UN 9/16 - 18 female**	SPC 205.08.7314/JV
145 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	_			Rc 1/4 female	SPC 205.10.7111/JV
	5	10 plugs		UN 9/16 - 18 female**	SPC 205.10.7314/JV
19 125 19	0	10		Rc 1/4 female	SPC 205.12.7111/JV
For JIC profile male thread, consult us.	6	12 plugs		UN 9/16 - 18 female**	SPC 205.12.7314/JV

\* In case of fitting from the underside of the plate, the caps must be placed on the lateral tappings.

#### Additional equipment

• Parking plate and foolproof keying system: see part-numbers page 14.

Options and additional equipment shown on pages 6 and 7.

\*\* according to SAE J1926-1

### Part-numbers

#### SPC 205.16 - Press equipment



<sup>\*</sup> according to SAE J1926-1

#### **Options**

Add the corresponding option codes to the part-numbers above:

- Safety locking ......
  VS code
- Reversed control lever ..... LH code

•	VS and LH option combination	VS/LH code
•	Proximity sensor	DP code



#### SPC 205.16 - Mould equipment

Model	Number of nozzles	Plate fitted with	Plug positioning	End connection	Part-numbers
A. S. S. LANDER	7	14 plugs		G 1/4 female	SPC 205.14.7101/JV
An and a second se	8	16 plugs		G 1/4 female	SPC 205.16.7101/JV



Model	Number of nozzles	Plate fitted with	Plug positioning	End connection	Part-numbers
7	7	14 plugs		Rc 1/4 female	SPC 205.14.7111/JV
				UN 9/16 - 18 female**	SPC 205.14.7314/JV
8	0	16 pluga		Rc 1/4 female	SPC 205.16.7111/JV
	o To plugs	ro plugs		UN 9/16 - 18 female**	SPC 205.16.7314/JV



For JIC profile male thread, consult us.

\* In case of fitting from the underside of the plate, the caps must be placed on the lateral tappings.

#### **Additional equipment**

• Parking plate and foolproof keying system: see part-numbers page 14.

\*\* according to SAE J1926-1

Options and additional equipment shown on pages 6 and 7.

# Additional equipment part-numbers

To be separately ordered.

#### **Parking plate**



Plate models	Part-numbers
SPC 203	MPP 01.9005
SPC 205	MPP 01.9004

Proximity sensor option: add **/DP** code to the part-number.

#### Foolproof keying kits

Plate models	Number of possible plates	Kit part-numbers	
SPC 203	3	KCP 01.9008	
SPC 205	4	KCP 01.9007	

#### For optimal use of your multi-connection plates



Stäubli offers, on simple request, drawings containing detailed information about plate assembly, circuit wiring, keying kit and sensors assembly as well as all the other options and additional equipments.

Plate models	Plate part-numbers	Drawing part-numbers
SPC 203	SPC 203.12.1100/JV + SPC 203.12.7100/JV	R 359 060 00
	SPC 203.12.1309/JV + SPC 203.12.7309/JV	R 359 063 00
	SPC 205.12.1101/JV + SPC 205.12.7101/JV	R 359 061 00
SBC 005	SPC 205.12.1314/JV + SPC 205.12.7314/JV	R 359 062 00
SPC 205	SPC 205.16.1101/JV + SPC 205.16.7101/JV	R 359 064 00
	SPC 205.16.1314/JV + SPC 205.16.7314/JV	R 359 065 00



# Technical characteristics

		SPC 203	SPC 205
Nominal diameter DN (mm)		3	5
Shut-off	double *		

Non-spill, flat face socket and plug.

#### Conditions of use of the SPC plates (1)

- Maximum allowable pressure PS (bar) (2): 100
- Minimum and maximum allowable temperatures TS (°C): -10 and +100

#### <sup>(1)</sup> Check that max. pressure and min./max. working temperatures of hoses, fitting pipes to the mould and of the connection are not exceeded. Other conditions of use: consult us.

<sup>(2)</sup> In case of partial use of the plates, make sure to distribute the inlet/outlet circuits so as to balance the pressures on either side of the locking system and to connect the circuits in accordance with the indication of the table below. For more information, consult us.

Number of connected circuits	Plate models		
	SPC 203 and SPC 205.12	SPC 205.16	
2	12 02, 15 05	13 03, 17 07	
3	I1 01, I2 O2, I4 O4	12 02, 13 03, 16 06	
4	I1 01, I2 O2, I4 O4, I5 O5	12 02, 13 03, 16 06, 17 07	
5	I1 01, I2 O2, I3 O3, I4 O4, I5 O5	12 02, 13 03, 14 04, 16 06, 17 07	
6		12 02, 13 03, 14 04, 16 06, 17 07, 18 08	
7		12 02, 13 03, 14 04, 15 05, 16 06, 17 07, 18 08	

Ix Ox = 1 circuit / Ix = inlet / Ox = outlet

#### Hydraulic flow rate/pressure drop chart for a circuit



Performances	SPC 203	SPC 205
Flow per socket (l/min)	2.85	8
Opening time for each nozzle on a cylinder with a volume of 19.5 cm <sup>3</sup> (s)	0.4	0.15

Test conditions:

Fluid: water

Direction of flow: socket ---> plug

#### Tightness

Fluorocarbon (FPM) seals as standard.

**Proximity sensor** 

- PNP M8 x 1
- 1 connector M12 + 5 m of 3 wire cable



Stäubli Units O Representatives/Agents

### Global presence of the Stäubli Group

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