

SPC All fluids





Applications

Machine tools:

- Connection and disconnection of machining and broaching heads
- Hydraulic clamping and palletization

Cooling:

- Inserts and modules on molds
- Electronics

Perfectly designed...

5 diameters available:

1/8", 3/16", 5/16", 1/2" and 13/16"

Pollution-preventing flat-faced design ensures fluid integrity

- No introduction of air or contaminants into your circuits
- No pollution of the working area
- Cleaning facilitated before connection

Flat face



Reliability

The SPC is designed for high frequency use (up to 1 million connections).

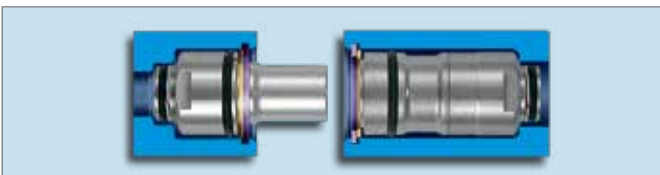
Efficiency

The SPC range is compact and guarantees excellent flow with minimal outside dimensions, regardless of flow direction.

In addition, the SPC maintains full flow even if the coupling is not fully connected, with a tolerance of 0.079 in.

Two installation options for complete integration into the machine:

Floating on both sides: zero interface



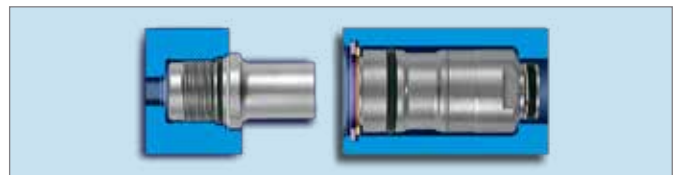
Socket and plug recessed into pocket and fixed onto the machine by elasticated ring.

Recessed installation into pocket provides the minimum outside dimensions.

In the case of floating installation, zero interface between plug and socket offers extra space saving.

Two installation options means the SPC can be adapted to all your needs.

Rigidly installed plug: zero or 0.165 in interface



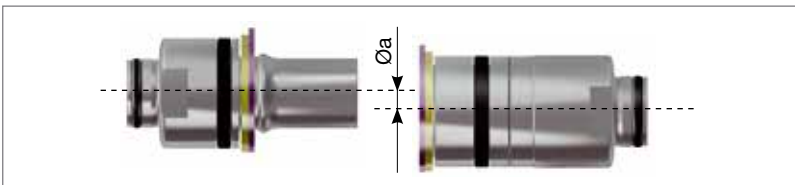
Socket recessed into pocket and plug screwed into the machine with O ring sealing.

... to fully integrate with your machine

Compensation of connection misalignment defects

- A form of preguiding combined with an elasticated connection allows a degree of misalignment between plug and socket on connection.
- To ensure the compensation of connection misalignment defects, the pocket centers must be **within the diameter of circle a**.

Compensation of all connection misalignment defects

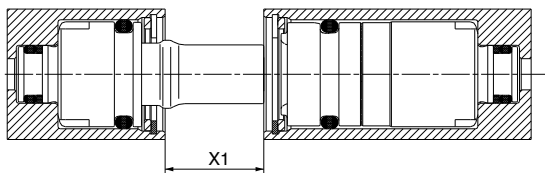


Ø max. a (in)	SPC 03 - 05 - 08 - 12	SPC 20
"Floating on both sides" installation	0.020	0.060
"Rigidly installed plug" installation	0.010	0.030

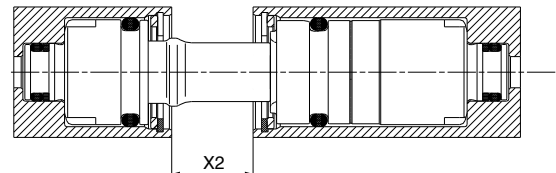
3D files available on request for flawless integration from project inception.



Total stroke



Stroke with connection force



X1 and X2 values: see technical data pages 4 and 5.



Technical data

	SPC 03	SPC 05	SPC 08	SPC 12	SPC 20
Nominal bore (in)	1/8"	3/16"	5/16"	1/2"	13/16"
Max. Working pressure (psi)	6525	4350	3625	2320	2320
Connection force (N)	45	60	90	160	286
Connection stroke (in)	$X_1 = 0.472$ $X_2 = 0.374$	$X_1 = 0.689$ $X_2 = 0.571$	$X_1 = 0.807$ $X_2 = 0.650$	$X_1 = 1.102$ $X_2 = 0.925$	$X_1 = 1.57$ $X_2 = 1.12$
Repulsion cross section (sq. in)	0.0465	0.1318	0.2744	0.5580	1.4883
Volume of air introduced* at connection (in³)	0.000122	0.001525	0.003356	0.003844	0.005613
Spillage* at disconnection (in³)	0.000122	0.000915	0.001587	0.002319	0.003112
Volume of liquid displaced (in³)					
- Socket side	0.0128	0.0616	0.1379	0.4150	1.4720
- Plug side	0.0104	0.0482	0.1220	0.3411	1.3548
Weight (oz)					
- Socket	0.62	1.71	2.85	6.96	18.15
- Plug in pocket	0.42	1.13	2.18	5.18	12.86
- Screwed plug	0.25	0.76	1.37	3.06	10.20

* These are not cumulative values: they decrease with the number of cycles.

Operating temperatures depending upon the type of seal**

Types of seal	Operating temperatures
Nitrile (NBR)	5 to + 212 °F
Fluorocarbon (FPM)	14 to + 302 °F
Ethylene-Propylene (EPDM)***	- 4 to + 302 °F

For use outside the indicated temperature ranges: consult us.

** The minimal temperatures of use are given for static conditions and exempt from mechanical stress.

Sealing

3 types of seal:

- Nitrile (NBR)
- Fluorocarbon (FPM)
- Ethylene-Propylene (EPDM)***

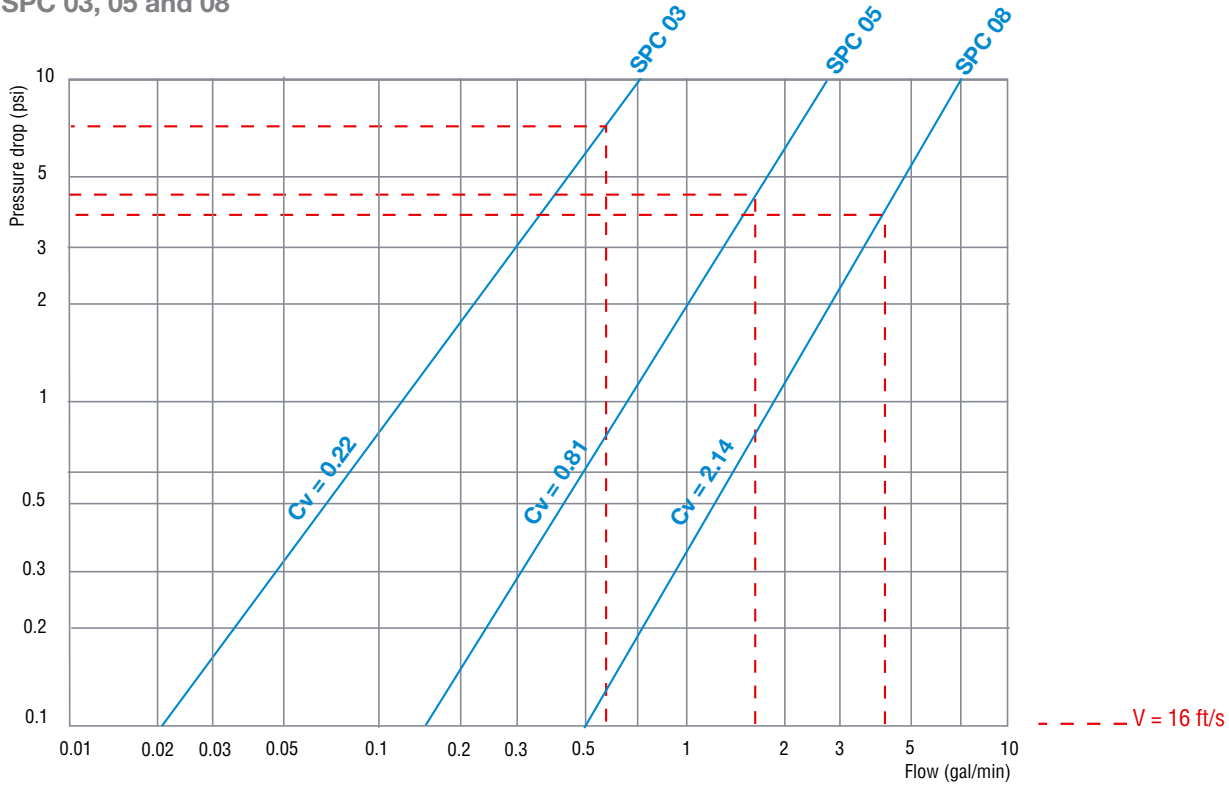
*** Important! The use and any contact of this seal with fluids of mineral origin (oil, fat...) is highly inadvisable.

Construction

High resistance stainless steel.

Hydraulic flow rate / pressure drop charts

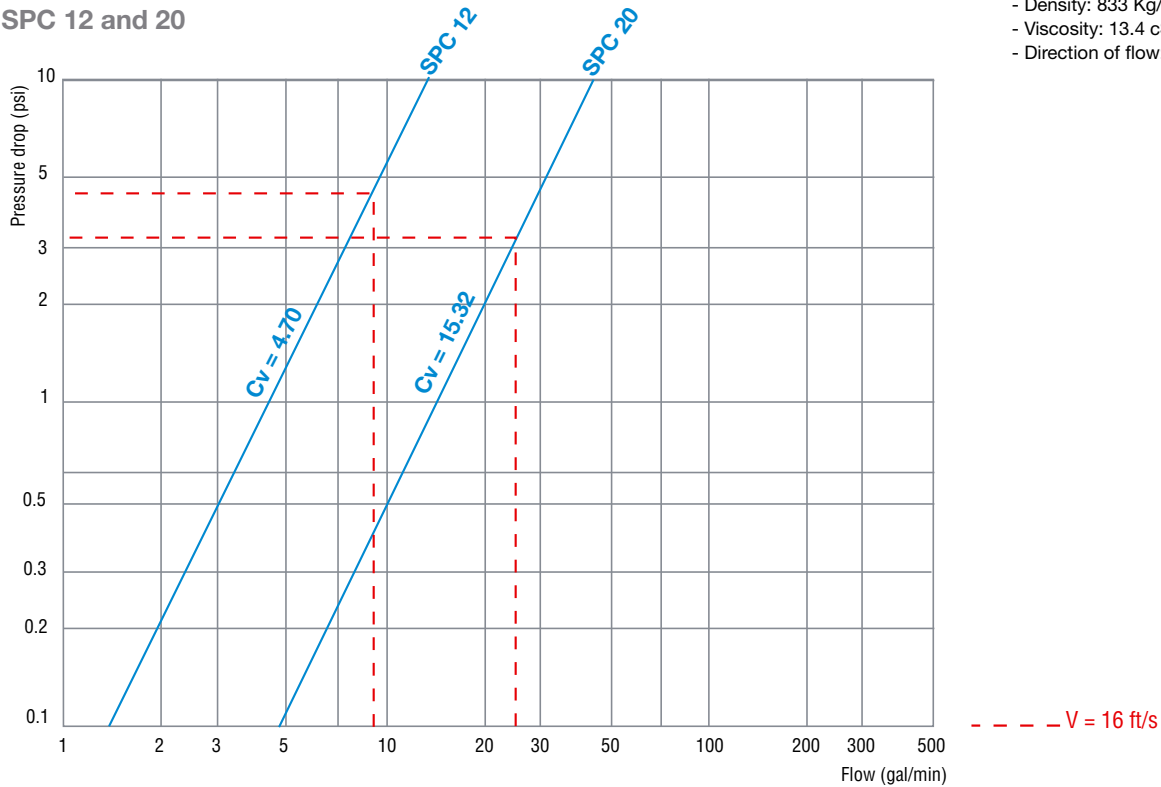
SPC 03, 05 and 08



Test conditions

- Fluid: hydraulic oil INVAROL FJ13 (H515)
- Density: 833 Kg/m³ at 104 °F
- Viscosity: 13.4 cSt at 104 °F
- Direction of flow: Plug → Socket

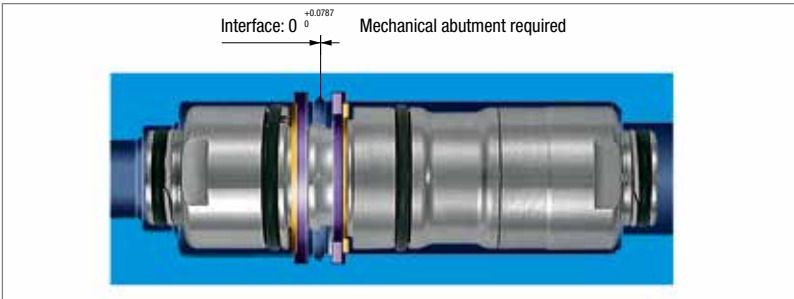
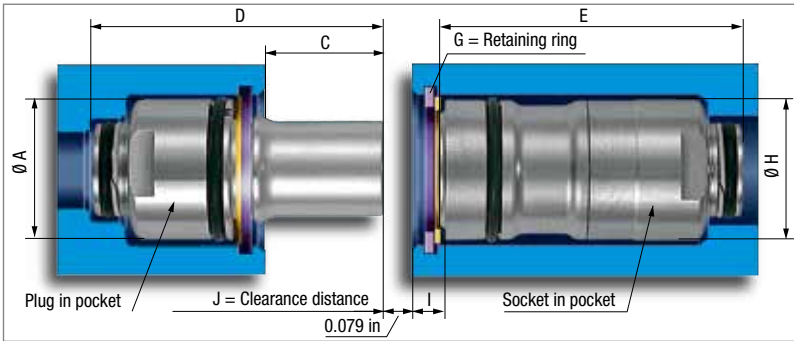
SPC 12 and 20



Flow (gal/min) for a speed of 16 ft/s				
SPC 03	SPC 05	SPC 08	SPC 12	SPC 20
0.56	1.56	3.98	8.96	24.90

Installation

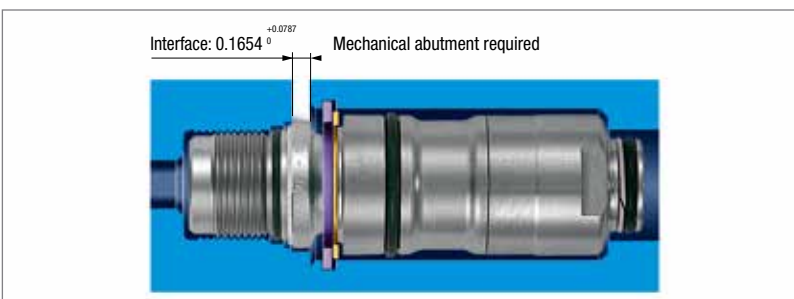
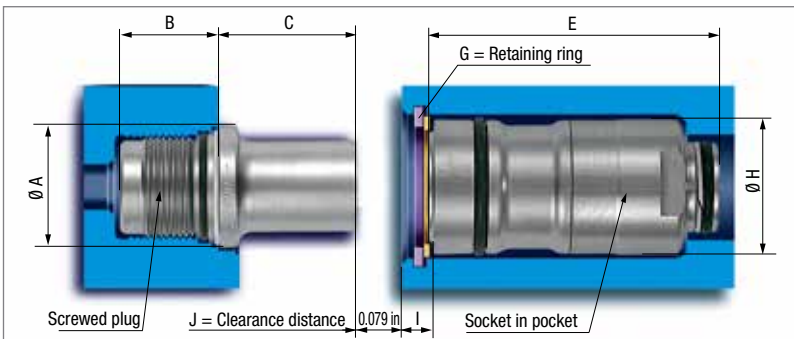
1 - SPC with socket and plug recessed into pocket



Models	Drawing part numbers*
SPC 03	R 335 010 10
SPC 05	R 335 011 10
SPC 08	R 335 012 10
SPC 12	R 335 013 10
SPC 20	R 335 015 10

*For design and recessed pocket machining.

2 - SPC with socket recessed into pocket and screwed plug



Models	Drawing part numbers*
SPC 03	R 335 010 11
SPC 05	R 335 011 11
SPC 08	R 335 012 11
SPC 12	R 335 013 11
SPC 20	R 335 015 11

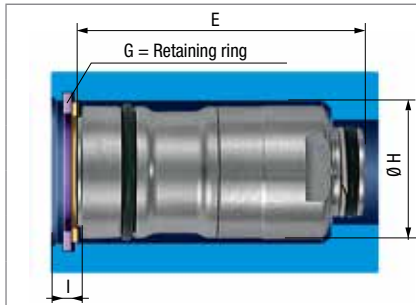
*For design and recessed pocket machining.

3 - Installation tools

Models	Installation tools for screwed plug		Extraction tools for socket	
SPC 03		R 135 910 00		R 235 900 01
SPC 05		R 135 911 00		R 235 901 01
SPC 08		R 135 912 00		R 235 902 01
SPC 12		R 135 913 00		R 235 903 01
SPC 20		R 135 915 00		R 235 905 01

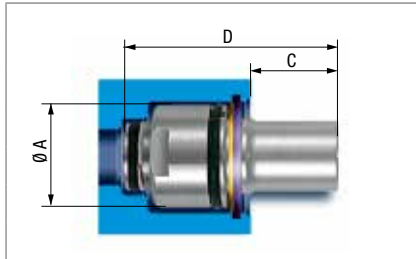
Part numbers

Sockets



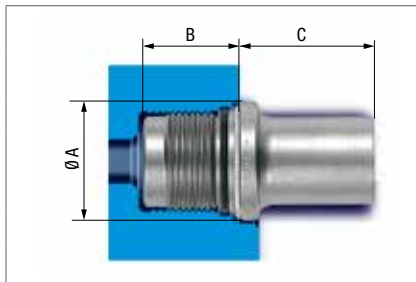
Models	Dimensions (in)				Part numbers
	E	G	Ø H	I	
SPC 03	1.28	SB	0.49	0.14	SPC 03.2000/IA
SPC 05	1.65	DIN 472	0.73	0.16	SPC 05.2000/IA
SPC 08	1.81	DIN 472	0.93	0.20	SPC 08.2000/IA
SPC 12	2.66	DIN 472	1.24	0.22	SPC 12.2000/IA
SPC 20	3.23	DIN 472	1.89	0.46	SPC 20.2000/IA

Plugs recessed into pocket



Models	Dimensions (in)			Part numbers
	Ø A	D	C	
SPC 03	0.49	1.30	0.47	SPC 03.5000/IA
SPC 05	0.73	1.71	0.69	SPC 05.5000/IA
SPC 08	0.93	1.95	0.81	SPC 08.5000/IA
SPC 12	1.24	2.52	1.10	SPC 12.5000/IA
SPC 20	1.81	3.23	1.57	SPC 20.5000/IA

Screwed plugs



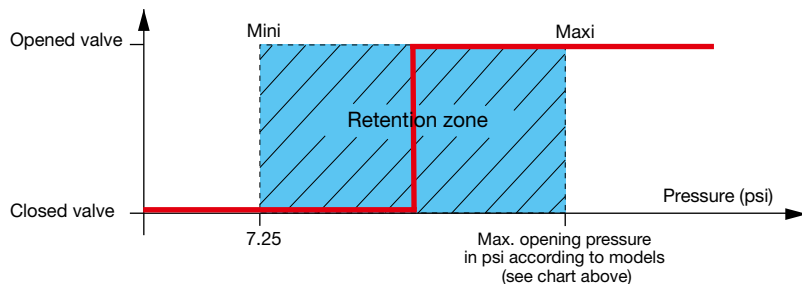
Models	Thread F	Dimensions (in)			Part-numbers
		Ø A	B	C	
SPC 03	M8 x 1	0.47	0.45	0.65	SPC 03.5408/IA/MD
SPC 05	M14 x 1.5	0.69	0.69	0.85	SPC 05.5414/IA/MD
SPC 08	M18 x 1.5	0.87	0.73	0.96	SPC 08.5418/IA/MD
SPC 12	M24 x 1.5	1.12	0.91	1.26	SPC 12.5424/IA/MD
SPC 20	M38 x 1.5	1.81	1.21	1.75	SPC 20.5438/IA/MD

CD option: sockets with discharge valves (limits residual pressures in the circuit)



Visual identification on the front face of the product ensures recognition.

Models	Part numbers	Max. opening pressure (psi) (see principal plan below)
SPC 03	SPC 03.2000/IA/CD	219
SPC 05	SPC 05.2000/IA/CD	124
SPC 08	SPC 08.2000/IA/CD	102
SPC 12	SPC 12.2000/IA/CD	87



- Nitrile seals in standard version
- Other available seals:
 - Fluorocarbon (FPM) seal = add /JV code at the end of the above part numbers
 - Ethylene-propylene (EPDM) seal = add /JE code at the end of the above part numbers

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