

For High Purity Chemicals

Semicon Cupla

SCAL Type

For semiconductor manufacturing equipment

Working pressure 0.2 MPa (2 kgf/cm ²)	Valve structure Two-way shut-off (Non-Spill)	Applicable fluids High purity chemicals Water Gas Air
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Body is polytetrafluoroethylene (PTFE).

- Polytetrafluoroethylene (PTFE) body gives excellent resistance to chemicals.
- Unique seal design ensures minimal liquid spill.
- Both socket and plug have built-in automatic shut-off valves that prevent fluid from outflowing when disconnected.
- No dissolution of metal ions from part in contact with liquid ensures excellent reliability.
- Push-to-connect design.
- Flanged socket body makes it easy to push down sleeve even when wearing gloves.
- All components are cleaned, assembled, inspected and then packed in a clean room.
- Concaved surface of the plug end prevents liquid loss and protects the plug seal surface from damage if dropped or hit.
- To prevent incorrect connection, a keyed type sleeve is available on a made-to-order basis.
- Ten key angle positions are available. The appearance of the keyed type body slightly differs from that of the standard type.

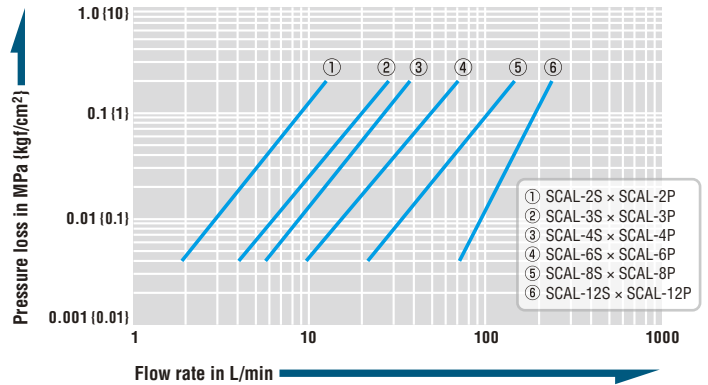


Specifications					
Body material		Polytetrafluoroethylene (PTFE)			
Size (Thread)		1/4", 3/8", 1/2", 3/4", 1" 1/4-18NPT, 3/8-18NPT, 1/2-14NPT, 3/4-14NPT, 1-11.5NPT			
Working pressure	MPa	0.2			
	kgf/cm ²	2			
	bar	2			
	PSI	29			
Seal material	Socket	Seal material	Mark	Working temperature range	Remarks
Working temperature range	O-ring	Perfluoroelastomer	P	+5°C to +50°C	Standard material
	Valve	Fluoropolymer resin (PFA)			

Min. Cross-Sectional Area (mm ²)						
Model (SCAL-□)	2S (-NPT) 2P (-NPT)	3S (-NPT) 3P (-NPT)	4S (-NPT) 4P (-NPT)	6S (-NPT) 6P (-NPT)	8S (-NPT) 8P (-NPT)	12S (-NPT/-FL-P) 12P (-NPT/-FL-P)
Min. Cross-Sectional Area	24	41	59	108	234	611

Flow Rate – Pressure Loss Characteristics

[Test conditions] • Fluid : Water • Temperature : 20°C ± 5°C



Volume of Spillage per Disconnection (mL)						
Model (SCAL-□)	2S (-NPT) 2P (-NPT)	3S (-NPT) 3P (-NPT)	4S (-NPT) 4P (-NPT)	6S (-NPT) 6P (-NPT)	8S (-NPT) 8P (-NPT)	12S (-NPT/-FL-P) 12P (-NPT/-FL-P)
Volume of spillage	0.07	0.09	0.13	0.20	0.59	1.26

Interchangeability

Different sizes are not interchangeable.

Models and Dimensions

WAF : WAF stands for width across flats.

Plug		Female thread			
Model	Mass (g)	Dimensions (mm)			
		L	øD	H(WAF)	T(Female thread)
SCAL-2P	37	50	27.5	24	Rc 1/4
SCAL-2P-NPT					1/4-18NPT
SCAL-3P	73	63	34.5	30	Rc 3/8
SCAL-3P-NPT					3/8-18NPT
SCAL-4P	107	72	39.5	36	Rc 1/2
SCAL-4P-NPT					1/2-14NPT
SCAL-6P	153	77	48	41	Rc 3/4
SCAL-6P-NPT					3/4-14NPT
SCAL-8P	348	109	59	50	Rc 1
SCAL-8P-NPT					1-11.5NPT
*SCAL-12P-NPT	740	126	80	75	1 1/2-11.5NPT

*Made-to-order item

Socket		Female thread			
Model	Mass (g)	Dimensions (mm)			
		L	øD	H(WAF)	T(Female thread)
SCAL-2S	97	(60.5)	40.5	27	Rc 1/4
SCAL-2S-NPT					1/4-18NPT
SCAL-3S	135	(69.5)	47	32	Rc 3/8
SCAL-3S-NPT					3/8-18NPT
SCAL-4S	177	(76)	52	36	Rc 1/2
SCAL-4S-NPT					1/2-14NPT
SCAL-6S	339	(90)	65	46	Rc 3/4
SCAL-6S-NPT					3/4-14NPT
SCAL-8S	656	(109)	80	60	Rc 1
SCAL-8S-NPT					1-11.5NPT
*SCAL-12S-NPT	1580	(144.5)	108	80	1 1/2-11.5NPT

*Made-to-order item

- Plug comes with a cap made of high density polyethylene (HDPE).
- Outer appearance of NPT thread type differs slightly from that of the above.
- Please contact us about end configurations other than female thread such as flange and male thread.
- Excessive tightening will damage the threaded part and result in leakage.
- Note: A very small amount of gas can permeate polytetrafluoroethylene (PTFE) bellows in the socket.

Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.